THE REPORT

OF THE

PRESIDENT

OF

QUEEN'S COLLEGE, CORK,

FOR

THE ACADEMIC SESSION 1876-7;

WITH APPENDICES.

Presented to both Houses of Parliament by Command of Her Majesty.

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THE ACADEMIC SESSION 1876-7.

TO THE QUEEN'S MOST EXCELLENT MAJESTY.

MAY IT PLEASE YOUR MAJESTY:—

In compliance with a provision of the Act of Parliament founding the Queen's Colleges (8 and 9 Vict., c. 66, s. 20), and in accordance with the College Statutes, I have the honour of submitting to Your Majesty the following Report of the Proceedings and of the Condition of Queen's College, Cork, for the Academic Session 1876-77.

Before the Session opened Mr. Robert J. Kenny, who held the office of Registrar for many years, retired on superannuation, and Your Majesty was pleased to appoint as his successor Alexander Jack, M.A., Professor of Engineering. As the new Registrar resides in the College, in the house formerly occupied by the Vice-President, he is able to fulfil all the statutable duties of his office, which include the care of the College buildings and property.

Since the close of the Session Dr. Reay Greene, Professor of Natural History, has resigned his chair through ill health. Dr. Greene's resignation does not, I am sorry to say, cause a vacancy, for by an arrangement made in 1863, solely upon economic grounds, and embodied in the existing College Statutes, the duties of the chair of Natural History now devolve upon the Professor of Mineralogy and Geology.

1. MATRICULATION EXAMINATION, TOTAL NUMBER OF STUDENTS, AND THEIR CLASSIFICATION ACCORDING TO ACADEMIC STANDING AND FACULTIES.

At the General Matriculation or Entrance Examination held on Tuesday, the 17th of October, and a Supplementary Examination held on Tuesday, the 14th of November, 67 Candidates presented themselves, of whom 53 were admitted, and 14 not admitted. To these are to be added 2 Students admitted *ad eundem* from other Universities, and 13 new Non-Matriculated Students, making the

total number of new Students 68 ; of whom 64 took out lectures,
and 4 through illness or other causes did not. The following
table shows the classification according to Faculties of the new
Students who took out lectures :—

							Matriculated Students.	Non-Matriculated Students.	Total.
Faculty of Arts,	.	.	.	.	.	.	18	3	21
,, Law,	.	.	.	.	.	.	1		1
,, Medicine,	.	.	.	.	.	.	27	9	36
School of Engineering,	.	.	.	.			5	1	6
							51	13	64

In addition to the newly Matriculated Students 12 Students
who had matriculated in former years, but who had not from
various causes taken out lectures, joined the first year's classes.
The total number of Matriculated Students on the College books
for the Session 1876–77 was 208, and of Non-Matriculated 24, or
together 232, who were distributed among the several Faculties
as follows :—

							Matriculated Students.	Non-Matriculated Students.	Total.
Faculty of Arts,	.	.	.	.	.	.	60	3	63
,, Law,	.	.	.	.	.	.	4		4
,, Medicine,	.	.	.	.	.	.	132	20	152
School of Engineering,	.	.	.	.			21	1	22
Gross Total,	.	.	.	.			217	24	241
Deduct number of Students attending } Lectures in two Faculties. }							9		9
True Total,	.	.	.	.			208	24	232

In the following table the Matriculated Students on the College
books for the Session 1876–77 are classified according to Faculties
and Academic Standing :—

							Number of Matriculated Students on the College Books of the				
							First Year.	Second Year.	Third Year.	Fourth Year.	Total.
Faculty of Arts,	.	.	.	.	.	.	29	14	7	10	60
,, Law,	.	.	.	.	.	.	2	—	1	1	4
,, Medicine,	.	.	.	.	.	.	33	43	30	26	132
School of Engineering,	.	.	.	.			9	2	10	—	21
Gross Total,	.	.	.	.			73	59	48	37	217
Deduct Number of Students attending Lectures } of another Year also, }							1	1	3	4	9
True Total,	.	.	.	.			72	58	45	33	208

2. COMPARISON OF THE NUMBER OF STUDENTS ATTENDING THE COLLEGE DURING THE PAST SESSION WITH THE NUMBER IN EACH OF THE PRECEDING FIVE SESSIONS RESPECTIVELY.

The number of Students on the College books for the Session
1876–77 was less than for either of the five preceding Sessions, as

will be seen from the following table in which the Students are classified according to Academic Standing :—

	Number of Students in the Session of					
	1871-72.	1872-73.	1873-74.	1874-75.	1875-76.	1876-77.
Matriculated Students—						
Of the First Year,	90	106	77	79	95	72
" Second "	47	61	68	60	48	58
" Third "	52	36	52	58	49	45
" Fourth "	27	26	31	30	34	33
Attending Special Courses,	14	3	...	...	...	...
Total,	230	232	228	227	226	208
Non-Matriculated Students,	23	20	22	23	24	24
Total Number of Students,	253	252	250	250	250	232

In the following table the Students on the College books during the same years are classified according to Faculties :—

	Number of Students in the Session of					
	1871-72.	1872-73.	1873-74.	1874-75.	1875-76.	1876-77.
Faculty of Arts,	56	49	64	56	53	63
" Law,	12	12	7	7	3	4
" Medicine,	173	174	170	174	176	152
School of Engineering,	35	22	19	23	27	22
Gross Total,	286	257	260	262	259	241
Deduct Number of Students attending Lectures in two Faculties,	13	5	10	12	9	9
True Total,	253	252	250	250	250	232

From these tables it will be perceived that the decrease took place in the Faculty of Medicine, and among the first year Students. The changes which recently took place in several of the Chairs in the Medical School, and the modifications in the methods of teaching, especially as regards practical work, introduced by the new Professors, led, as was to have been expected, to a diminution in the number of casual Students who come from a distance. But if the number of Students was somewhat less the work of the Medical School was never more thoroughly done than during the last Session.

3. LOCALITIES FROM WHENCE STUDENTS COME.

In my last Report I pointed out that the majority of the Students of Queen's College, Cork, in the Session 1874-75 and 1875-76 belonged to the Province of Munster, for the use of which the College was established, and chiefly to the county and city of Cork, in which it is situated. The following table shows that this was also the case during the past Session :—

	Per-centage of Matriculated Students from		Per-centage of Munster Students from	
Session.	Province of Munster.	Other Localities.	County and City of Cork.	Other Counties of Munster.
1874-75,	93·3	6·7	76·5	23·5
1875-76,	85·8	14·2	75·2	24·8
1876-77,	90·6	9·4	78·3	21·7

4. AGES OF STUDENTS.

Of the new Students 70·3 per cent. were 17 years of age and upwards, and 29·7 per cent. under 17 years of age. Taking all the Matriculated Students on the College books 90·8 per cent. were 17 years of age and upwards, 9·2 per cent. under 17 years of age, and 45·5 per cent. 20 years of age and upwards.

5. RELIGIOUS DENOMINATIONS OF STUDENTS.

In the following table the Students Matriculated in the Session 1876–77, and the new Non-Matriculated Students, are classified according to the religious denominations to which they belong:—

	Matriculated for the Session.			
	New.	Formerly Non-Matriculated, or Matriculated in Engineering only.	Now Non-Matriculated Students.	
Roman Catholics,	26	2	28	7	35
Church of Ireland,	18	1	19	6	25
Presbyterians,	3	...	3	...	3
Wesleyans,	4	1	5	...	5
Independents,	1	...	1	...	1
Total,	72	58	45	13	68

The four Students enumerated in column 2 of the foregoing table have not been included in the table of new Matriculated Students given as p. 6.

In the following table all the Students on the books of the College for the Session 1876–77 are classified according to religious denominations and Academic Standing:—

	Matriculated Students.					
	First Year.	Second Year.	Third Year.	Fourth Year.	Non-Matriculated Students.	Total.
Roman Catholics,	31	29	19	21	13	113
Church of Ireland,	30	25	22	19	11	100
Presbyterians,	3	3	1	...	...	6
Wesleyans,	8	1	3	...	...	12
Independents,	1	...	...	...	...	1
Total,	72	58	45	33	24	232

Roman Catholics formed, therefore, 48·7 per cent. of all the Students of the College in the past Session.

The following table gives the number of Students of each religious denomination in the several Faculties:—

Faculty.	Roman Catholic.			Church of Ireland.			Pres-by-ter-ians.	Wes-ley-ans.	Others.	Total.			Grand Total
	Matr.	Non-Matr.	Total.	Matr.	Non-Matr.	Total.	Matr.	Matr.	Matr.	Matr.	Non-Matr.	Total.	
Faculty of Arts, .	22	2	24	35	1	36	6	6	1	60	8	63	
" Law, .	3	...	2	1	...	1	...	...	...	4	...	4	
" Medicine, .	75	11	86	54	8	62	...	4	...	133	19	152	
School of Engineering, .	5	...	5	13	1	14	...	3	...	21	1	22	
Gross Total,	105	13	118	10	10	113	6	13	1	218	23	241	
Deduct No. of Students attending Lectures in two Faculties,	...	...	5	...	...	1	...	2	...	9	...	9	
Total,	100	...	113	100	...	...	6	1	1	309	23	232	

In the following table the number of Scholars and Exhibitioners in the Session 1876–77 of each religious denomination is given:—

	Roman Catholics.		Church of Ireland.		Presbyterians.	Wesleyans.	Total.
	Scholarships.	Exhibitioners.	Scholarships.	Exhibitioners.			
Faculty of Arts,	6	6	9	5	—		31*
„ Law,	1		1		1		3
„ Medicine,	5	4		2	2	1	14
School of Engineering,	—	1					3
Total,	14	8	14	5	4	1	51*
	22		19		5		51*

The fluctuations which take place from time to time in the relative numbers of Students belonging to the several religious denominations may be seen from the following table, in which the numbers for the Session 1876–77 are contrasted with those of each of the preceding ten years:—

Religious Denominations.	TOTAL NUMBER OF STUDENTS OF EACH RELIGIOUS DENOMINATION IN THIS SESSION AND										
	1866-67	1867-68	1868-69	1869-70	1870-71	1871-72	1872-73	1873-74	1874-75	1875-76	1876-77
Roman Catholics,	108	111	97	94	80	104	107	123	129	131	113
Church of England, and now of Ireland,	104	118	126	134	142	131	130	114	90	101	102
Presbyterians,	7	11	12	8	12	10	8	8	8	7	6
Wesleyans,	9		1	10	16	10	8	5	10	11	10
Other Denominations,		2				2					1
Class Not recorded,	2		7				7				
Total,	230	247	244	252	259	252	252	255	236	250	232

Calculating from the foregoing table the per-centage of the total number of Students for each of the years it embraces who were Roman Catholics, Protestants of the Established Church of its present representative the Church of Ireland, and Protestants of all other denominations, we get the following table which will, perhaps, show the character of these fluctuations better than the preceding table:—

	Per-centage of total Students who were			
Session.	The Established Church or Church of Ireland.	Other Denominations.	All Denominations.	Roman Catholics.
	Protestants of the			
1866-67,	46·08	6·95	53·03	46·95
1867-68,	47·77	7·28	55·05	44·93
1868-69,	51·22	9·03	60·25	39·75
1869-70,	53·17	9·52	62·69	37·20
1870-71,	56·80	8·80	65·60	34·40
1871-72,	51·77	7·11	58·88	41·10
1872-73,	51·58	5·15	56·73	43·46
1873-74,	46·40	4·40	50·80	49·20
1874-75,	38·40	7·50	45·90	51·60
1875-76,	40·40	7·20	47·60	52·40
1876-77,	43·10	8·19	51·30	48·70

* The numbers marked with an asterisk differ by 1 from the corresponding number in the table given under Scholarships and Exhibitions, p. 10, because two Scholarships in different divisions of the Faculty of Arts were awarded to the same Student, he having been first on each list.

6. SCHOLARSHIPS, EXHIBITIONS, &c.

The Scholarship Examinations commenced on Thursday, Oct. 18th, and were continued on the days given in the table in the Appendix (A, No. 1., p. 24). The subjects of examination prescribed by the College Council, and published in the College Calendar, and the conditions under which Scholarships are held, will also be found in the Appendix (A, No. 1., p. 23 ; No. II., p. 34 ; No. III., p. 40 ; No. IV., p. 43 ; and No. V., p. 49). These examinations were conducted chiefly by printed papers, copies of which will be found in the Appendix (D, No. 14., p. 113). Of the 46 Junior Scholarships at the disposal of the Council, 10 in the Faculty of Arts open to Students of one year's standing are tenable for two years, so that in reality there are only 20 Junior Scholarships in Arts, or 36 in all the Faculties at the disposal of the Council each year. Of these 25 were awarded, or, adding those held by Students of two years' standing awarded the preceding Session, 31. Of the 8 Senior Scholarships 7 were awarded. There was considerable competition for the Junior Scholarships open to Students at entrance, and the answering of the Candidates for the Science Scholarships was so good that the Council awarded Exhibitions to four of the unsuccessful Candidates whose answering was deemed worthy of a special prize. Exhibitions were also awarded to the unsuccessful Candidates for Senior Scholarships—namely, one in Modern Languages, Literature, and History, one in Mental and Social Science, and one in Chemistry. Two Exhibitions were awarded to unsuccessful Candidates for Second and Third Year Scholarships in the Faculty of Medicine.

The following table shows the number of Scholarships in each Faculty, the number awarded in the past Session, or held from the preceding one ; and also the number of Exhibitions awarded :—

Faculty.	Total No. of Scholarships.	No. of Scholarships awarded.	No. of Exhibitions awarded.
Faculty of Arts—			
Junior Scholarships—			
Open to Students at Entrance, .	10	10	4
Open to Students of One Year's standing, or those entering on Second Year, .	10	6	
Held by Students of Two Years standing, or those of Third Year,	10	3	
Total, .	30	19	4
Senior Scholarships, .	7	6	3
Faculty of Law—			
Junior Scholarships—			
Senior	3	1	1
	1	1	..
Faculty of Medicine, .	8	8	6
School of Engineering, .	5	3	..
Total, .	54	38	14

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The Exhibitions in the Faculty of Medicine enumerated in the foregoing table include three Special Exhibitions awarded by the Council at the end of the session. Two of the Scholarships

in the Faculty of Medicine, those of the first year, are intended to promote the general education of Students who enter the Faculty directly without having previously graduated in Arts; the remaining Scholarships are given to encourage a thorough study of the theoretical parts of Medical Science. With the view of encouraging the study of the practical parts also, especially a thorough attention to hospital practice, the Council last Session offered three Exhibitions of the value of £15 each; one in Surgery, one in Medicine, and one in Midwifery. The examination in Surgery embraced a clinical examination and report of four cases in hospital selected by the Examiner, an examination in Clinical Surgery, and Operative Surgery, including operations on the subject. The examination in Medicine embraced a clinical examination and report of four cases in hospital selected by the Examiner, and an examination in Practical Medicine, and on appliances for, and aids to medical diagnosis. The examination in Midwifery also comprised a clinical examination and report of a number of cases, and an examination on the use of obstetric appliances. These Exhibitions were open to all Students of not more than four years' standing, both matriculated and non-matriculated, were well contested, and promise to produce good results.

The Council also offered last Session a special prize of £5 for the promotion of the study of Ancient History.

The name "Scholarship" given to the prizes appointed by the College Statutes tends to mislead the public as to their true character and value. Strictly speaking they are only Exhibitions, and differ from the prizes called by that name in the foregoing table in their number and value being fixed by the Statutes, while the Exhibitions are awarded by the College Council at their discretion when they happen to have a fund available for the purpose. The competition for the statutable Exhibitions or Scholarships naturally varies in different Sessions. Thus last Session there was much competition for the Junior Scholarships awarded at entrance, and for most of the Senior Scholarships, while that for the Scholarships of the Second Year was not good. Add to this that the Council being anxious to keep up a high standard of answering are careful not to award a Scholarship unless the candidate has reached a certain standard, and that they rigidly enforce the regulation that holders of Scholarships and Exhibitions must pass the Sessional Examinations of their year, otherwise they forfeit their stipends; it follows, therefore, that Scholarships even when competed for may not be awarded, and others are forfeited because the holders fail to pass their subsequent Sessional Examinations. The fund created by such lapsed and forfeited Scholarships in one department enables the Council to award Exhibitions in other departments where the competition has been greater, and the merit of the unsuccessful candidates for Scholarships such as to deserve special prizes. If we add to the Exhibitions given at or Scholarships awarded each Session the Exhibitions given at the discretion of the Council we shall find that the sum will

generally not be much short of the total number of Scholarships appointed by the Statutes.

The names of the Scholars and Exhibitioners in the Session 1876–77 will be found in the Appendix (B, No. VII., p. 52).

7. LECTURES.

A list of the subjects in which instruction is given in the College, the total number of Students who attended classes in those subjects, and the number of lectures given in each subject, will be found in the Appendix (B, No. X., p. 56). Under the head of each Faculty, detailed information as to the courses of studies, outlines of the lectures given by each Professor, &c., are also given in the Appendix (A, Nos. II., III., IV., and V., pp. 29, *et seq.*, 39, 42, 46, *et seq.*). Each Professor has also furnished a Special Report of his work for the Session. From these Reports which are given in the Appendix (C, No. XI., p. 56, *et seq.*), it will be seen that the attendance of the Students was satisfactory.

The Professor of English Law notices in his Report a matter of great moment to the Law School of this College—namely, that the lectures of the Incorporated Society of Attorneys, given in Dublin, attendance upon which is compulsory on every attorney's apprentice, clash with the law lectures of this College; and as the council of the Incorporated Society do not accept the latter as a substitute for those of their own Lecturer, Students who are apprentices cannot consequently attend the law lectures in the College with regularity. I hope the Council of the Incorporated Society, in the interests of legal education, will follow the example of the Benchers of the King's Inns, and recognise the law lectures given in the Queen's Colleges as the equivalent, in part at least, of those delivered in Dublin by their own Lecturer.

The only other matter in these Reports which calls for special mention here is the recommendation made by the Professor of Anatomy and Physiology, and the Professor of Materia Medica to institute a Summer Session of the Faculty of Medicine. The Professor of Materia Medica has well pointed out the *defects* of the present system of one Session in the year, and indicated some of the reasons which may be urged in favour of adding a second or Summer Session. I must be admitted that under the present arrangement the Professors of that Faculty have great difficulty in making satisfactory arrangements about their lecture hours, and that the Students' time and energies are much taxed. The suggestion is, therefore, well worthy of careful consideration, which I have no doubt it will receive from the Council next Session.

8. SESSIONAL EXAMINATIONS AND PRIZES.

The examinations held at the end of the session, or in the case of those subjects which only occupy one or two terms, at the end of the course were satisfactory.

According to the present regulations of the College Council Students of Medicine must follow a prescribed curriculum and pass

the Sessional Examinations of their year if they wish to compete for the scholarships and prizes in the Faculty. These regulations though theoretically sound nevertheless seriously restrict competition, because many medical students, taking advantage of the freedom allowed by the universities and other licensing bodies in the order of taking out the courses of lectures required for a degree or license in medicine or surgery, do not strictly follow the order of the curriculum prescribed by the Council, and consequently render themselves thereby ineligible for scholarships and prizes. This seems to show that freedom in selecting the order in which the necessary courses should be followed offers practical advantages of some kind which many students consider of more value than the privilege of competing for scholarships and prizes, when coupled with an obligatory order of study. There can be no doubt on educational grounds that it would be much better for a student not to have this freedom of pursuing his studies at random; but until all the universities and licensing bodies agree upon a common course and enforce it rigidly, medical education might perhaps be better promoted by relaxing the regulations so as to enable all students to compete, and thus secure the far more important advantage of bringing as large a number of students as possible under Sessional Examinations.

The number of students who took part in the practical part of the Sessional Examination in Practical Anatomy, notwithstanding that few were eligible for the prizes, indicates that good results might be expected to follow from a relaxation of the regulation in the direction suggested. The subject has already engaged the attention of the Council.

Copies of the Sessional Examination Papers are given in the Appendix (D, No. XIV., pp. 71–87, 102–104, 107, 108–113), and the names of the students who were awarded prizes and certificates at those examinations and at other examinations in special subjects will also be found there (B. No. VIII., p. 53).

9. UNIVERSITY EXAMINATIONS.

The following table gives the number of students of Queen's College, Cork, who passed the examinations of their Standing and Faculty, and obtained Degrees, Diplomas, &c., at the June and October Commencements of the Queen's University in Ireland for the year 1876—

FACULTY OF ARTS.

Degree of Master of Arts (M.A.),	2	First University Examination in
„ Bachelor of Arts (B.A.),	11	Arts, ... 4

SCHOOL OF ENGINEERING.

Degree of Bachelor in Engineering,	2	First University Examination, . 5

FACULTY OF LAW.

Degree of Bachelor in Laws (LL.B.),	2.	

FACULTY OF MEDICINE.

Degree of Doctor in Medicine (M.D.),	23	First and Second University Examination in Medicine, . . . 3
„ Master in Surgery (M.Ch.),	18	
Diploma in Midwifery,	11	First University Examination in Medicine, ... 28
Second University Examination in Medicine,	11	

The names of those upon whom degrees were conferred, and of the undergraduates who passed the examinations of their standing, are given in the Appendix (B, No. VI., p. 50).

10. CONDUCT AND DISCIPLINE.

In the class-rooms, laboratories and library the conduct and discipline of the students was good, as will be seen by the Reports of all the Professors, and of the Librarian (see Appendix C, No. XI., p. 56, *et seq.*, No. XII., p. 69). Within the precincts of the College generally their conduct has been equally satisfactory; very few cases of misconduct within or without the College were reported to me during the session, and none of sufficient gravity to call for the direct action of the Council.

11. RECEIPTS AND EXPENDITURE OF THE COLLEGE.

The Bursar's Annual Account of the Receipts and Expenditure of the College for the year ending the 31st of March, 1877, and his special account of the expenditure of the Annual Parliamentary Grant for the maintenance of the College, and the College Fees and Fines for the same period, will be found in the Appendix (C, No. XIII., p. 70). The accounts of which these are abstracts have been signed and passed by the Auditor-General, and contain nothing which requires to be specially explained or noticed here.

12. LIBRARY.

It will be seen from the Report of the Librarian, which will be found in the Appendix (C, No. XII., p. 69), that 1,141 volumes have been added to the Library during the past year, of which 629 volumes were gifts. Among these the gift of William Crawford, of Lakelands, Esq., Cork, deserves particular notice here on account of the number (354 volumes) and value of the books given. Several of them are so costly that with our limited funds and many wants we could not afford to purchase them, though no important collegiate or public library should be without them. The College is, therefore, greatly indebted to Mr. Crawford for his gift, and for the worthy example he has set.

Considerable progress has been made with the re-arrangement of the books and the preparation of a catalogue. Until this work shall have been completed the number of books in the Library cannot be accurately stated; in the meantime the numbers given in the Librarian's Report, which have been carried on from year to year, must, as I have observed in my last Report, be regarded as approximate.

The Librarian points out in his Report that the want of adequate space and suitable accommodation for books in the Library requires immediate attention. In my last Report I called attention to this subject, and stated that notwithstanding the gain of space by the re-arrangement of the books, and doubling on the shelves long series of journals, the available book-space in the

Library would be fully taken up in two or three years. This calculation was based on the assumption that the annual growth of the Library would be about the same as in last Session. But Mr. Crawford's gift alone will occupy more space than the purchases of a whole year, so that the available space will be filled sooner than was anticipated.

In the Appendix (E, No. XV., p. 120) will be found a list of the books presented to the Library, and the donors' names.

13. PHYSICAL CABINET AND LABORATORY AND OBSERVATORY.

The Physical Cabinet referred to in my two preceding Reports is now provided with sufficient fittings to be used; and several important additions have been made to the collection of physical apparatus. The Professor of Natural Philosophy is now, therefore, fairly provided with the means of illustrating his lectures properly, and of giving practical instruction in several branches of experimental science. We cannot, however, practically teach the methods of observation employed in Astronomy, Magnetism, and Meteorology, because we have not an Observatory. Some steps have, however, been taken to provide one, and I hope in the course of next Session we shall be able to make a beginning.

14. PHYSIOLOGICAL LABORATORY.

The Professor of Anatomy and Physiology has begun the formation of a collection of apparatus with which to illustrate his lectures on Physiology by experiments in a manner worthy of the present state of that branch of science. A temporary Physiological Laboratory was also provided having a table for microscopical work, and four places for chemico-physiological investigation. The fittings of this temporary Laboratory were so constructed that they can be readily transferred at a trifling expense to the permanent Physiological Laboratory which forms the part of the plan for the re-arrangement and enlargement of the Medical School now being carried out. The new Laboratory will be ready for work next Session.

15. ENLARGEMENT AND IMPROVEMENT OF THE MEDICAL SCHOOL.

The detached building appropriated to the Medical School is too small for the present number of Students, and, having been erected piecemeal, the internal arrangements are defective, causing much inconvenience to Professors and Students, and seriously impeding the work of the School. I called attention in previous Reports to the insufficiency of the accommodation provided for certain departments, namely Practical Anatomy and Materia Medica, and especially to the want of a good anatomical and pathological museum. Parliament having this year voted a sum of money for these purposes a favourable opportunity presented itself for re-arranging the whole build-

ing upon a definite plan, which though based on the present
wants of the School, should nevertheless provide for the
gradual increase in the number of Students, which may reason-
ably be expected to take place within the next few years. Even
on economic grounds this would obviously be the best thing to
do. Mr. Owen, of the Board of Public Works, Ireland,
went into the matter carefully, and prepared plans which, if
carried out would have given us one of the best arranged
Medical Schools in the kingdom. The cost of this plan un-
fortunately would have exceeded the sum provided by the vote
of Parliament, and a different one had to be prepared. This
second plan though inferior to the first will, however, provide
ample and convenient accommodation for every Professor,
including a Physiological Laboratory, a Materia Medica Labora-
tory and Museum, a room for surgical and obstetrical instru-
ments and medical and surgical appliances, and an Anatomical
and Pathological Museum. The latter has been designed with
a view of ultimately forming the western extremity of the
extended façade of the College. The alterations in the existing
Medical School will be completed before the commencement of
next Session, and the new Museum in the course of the year.

16. MUSEUMS.

No additions of importance were made during the last year
to our archæological, zoological, anatomical, or pathological
collections, but many valuable and interesting specimens have
been added to our geological collections, especially to the
Palæontological part.

Some additions have also been made to our Herbarium, which
now contains about 50,000 named specimens. To make this
rich collection more useful, especially to local naturalists who
make considerable use of it, Mr. Sullivan, Superintendent of
the Botanic Garden, has undertaken to make a rough reference
catalogue of it, and has already registered about 25,000 plants.

Many strangers visit the Geological and Natural History
Museums, and local artists sometimes avail themselves of the
latter to study the forms of animals. We cannot exhibit
our archæological collections to the public from the want of
suitable cases in which to arrange them, and of a room which
could be set apart as a temporary Archæological Museum.
Provision having been made in this year's Parliamentary Esti-
mates for some museum cases, the first want will probably be
soon supplied. When the new cases are finished we shall be
able to arrange and label the many articles now in drawers,
and encourage the friends of the College to add to them. The
collection embraces prehistoric antiquities, especially Irish,
Greek, Roman, and other ancient antiquities, such as vases,
bronzes, coins, &c., and objects illustrative of the habits and
industry of uncivilized races. As the growth of such a museum
must necessarily depend almost wholly on gifts, we appeal to
the friends and former Students of the College to help us.

17. BOTANIC GARDEN.

The labelling of the plants in the Botanic Garden to which I referred in my last Report, has since been extended to all the different kinds of trees and shrubs in the College grounds, and is now nearly completed. I am sorry to have to report that nothing has yet been done to provide a glass-house for tropical plants, the great want of which I have pointed out in successive Reports. It is needless to dwell upon the necessity for such a house for teaching Botany, nor upon its utility for teaching Materia Medica, nor upon the advantages it would be to the Students of the local School of Art. I have received several offers of valuable plants for such a house, among others from the late H. M. Goulding, Esq., which I regret I was unable to accept.

We have again to thank Dr. D. Moore, Director of the Botanical Garden, Glasnevin, for his willing help in increasing our collection of hardy plants, by a gift of cuttings of fifty varieties of willows for our new ground.

18. EXTENSION OF COLLEGE GROUNDS AND NEW ENTRANCE TO THE COLLEGE.

The Lords Commissioners of Your Majesty's Treasury having sanctioned the purchase of additional ground on the condition that the College provided from its unappropriated balances one half the purchase-money, the Board of Public Works, Ireland, in whom the Colleges Act vest all lands purchased for the College with public money, is about to get possession of sufficient adjoining land to give a good boundary, and the power of making a new entrance to the College from the Western Road.

It would be difficult to exaggerate the importance of this purchase. In the first place it will take away the unsightly appearance on the north-east of the College, protect the College grounds from trespass, and those who live in the College from very unpleasant sights, give a better site than the present one, and adequate space for the Botanic Garden, and above all afford an opportunity for making an entrance to the College upon one of the chief highways to the city of Cork, and thereby bring the College nearer to town. I hope the new boundary wall will be built, and the newly purchased land cleared and levelled immediately, so that the College may get the benefit of this purchase with as little delay as possible.

I beg to subscribe myself,

Your Majesty's most dutiful servant,

WILLIAM K. SULLIVAN,

President.

B

APPENDIX.

Appendix A.

No. I.
General
Regulations
of College,
&c.

APPENDIX A.

No. I.

ESTABLISHMENT of the COLLEGE and UNIVERSITY. COLLE-
GIATE STAFF. GENERAL REGULATIONS of the COLLEGE.
STUDENTS: MATRICULATION, RESIDENCES, FEES, LECTURE
HOURS, SCHOLARSHIPS, EXHIBITIONS, PRIZES, DEGREES.

QUEEN'S UNIVERSITY IN IRELAND—QUEEN'S COLLEGE, CORK.

ESTABLISHMENT OF THE COLLEGE AND UNIVERSITY.

The COLLEGE is a Corporation under the name and style of "THE
PRESIDENT and PROFESSORS of QUEEN'S COLLEGE, CORK." It was founded
under the provisions of the Act 8 & 9 Victoria, cap. 66, intituled "An
Act to enable Her Majesty to endow new Colleges for the Advancement
of Learning in Ireland." Under the powers given by this Act the three
colleges of Belfast, Cork, and Galway were incorporated on the 30th day
of December, 1845. The Statutes were drawn up, and the system of
education to be pursued in them arranged by a Board called the "Board
of Queen's Colleges," consisting of the Presidents and Vice-Presidents of
the three colleges. The Professors were appointed on the 4th of August,
1849, and on the 30th of October of the same year the Colleges were
opened for the reception of students. Letters Patent constituting the
Statutes were issued on the 11th of December, 1849, and a further
Charter was issued in the year 1863.

The UNIVERSITY was founded in 1850 under the name and style of
the "QUEEN'S UNIVERSITY IN IRELAND," and its charter provides that
the Senate should have power to confer upon the students of the Queen's
Colleges of Belfast, Cork, and Galway such degrees and distinctions in
the Faculties of Arts, Law, and Physic, as are granted and conferred in
other Colleges and Universities of Great Britain and Ireland. The
Charter further ordains that any of the students of the three Queen's
Colleges who shall have obtained such Degrees in any of the several
Faculties of Arts, Medicine, and Law as shall be conferred by the
Chancellor and Senate of the Queen's University, shall be fully possessed
of all such rights, privileges, and immunities, as belong to similar De-
grees granted by other Universities or Colleges, and shall be entitled to
whatever rank and precedence is derived from similar Degrees granted
by other Universities.

The Professors of the three Queen's Colleges are entitled to style
themselves "Professors of the Queen's University."

COLLEGE STAFF.

President—WILLIAM K. SULLIVAN, Ph.D., M.R.I.A.

Professors.

The Greek Language,	E. VAUGHAN BOULGER, M.A.
The Latin Language,	BUNNELL LEWIS, M.A., F.S.A.
Mathematics,	CHARLES NIVEN, M.A., FELLOW OF TRIN. COLL. CAMB.
Natural Philosophy,	JOHN ENGLAND, M.A.
History and English Literature,	GEORGE F. ARMSTRONG, M.A.
Logic and Metaphysics,	GEORGE SIDNEY READ, M.A.
Chemistry,	MAXWELL SIMPSON, B.A., M.D., F.R.S.
Natural History,	JOSEPH REAY GREENE, B.A., M.D., M.R.I.A.
Geology and Mineralogy,	ROBERT HARKNESS, F.R.S.E. & E., F.G.S.
Modern Languages,	RAYMOND DE VERICOUR, M.A.
Jurisprudence & Political Economy,	RICHARD HORNER MILLS, M.A.
English Law,	MARK S. O'SHAUGHNESSY, M.R.I.A., L.L.B.
Anatomy and Physiology,	J. J. CHARLES, M.A., M.D., M.CH.
Medicine,	DENIS C. O'CONNOR, B.A., M.D.
Surgery,	WM. K. TANNER, M.D., & C. L.R.C.S.I.
Materia Medica,	MATTHIAS O'KEEFFE, M.A., M.D.
Midwifery,	JOSHUA H. HARVEY, B.A., M.D.
Engineering,	ALEXANDER JACK, M.A.

Lecturers.

Medical Jurisprudence,	{ MARK O'SHAUGHNESSY, M.R.I.A., F.R.S.L. { MATTHIAS O'KEEFFE, M.A., M.D.

Assistant to Professor of Chemistry, CORNELIUS O'KEEFFE, County and City Analyst.

Demonstrators of Anatomy, { Senior—WILLIAM JENNINGS, M.D., M.CH. { Junior—CHARLES Y. PEARSON.

Council of the College.

The President.

Professor TANNER.	Professor JACK.	Professor NIVEN.
,, HARVEY.	,, SIMPSON.	,, ARMSTRONG.

Officers.

Registrar,	ALEXANDER JACK, M.A.
Bursar,	JOHN ENGLAND, M.A.
Librarian,	RICHARD CAULFIELD, LL.D.

Steward and Superintendent of the Botanic Garden, , JOHN SULLIVAN.

GENERAL REGULATIONS.

THE COLLEGE SESSION, 1876–77.—The *First Term* commenced on the 17th of October, 1876, and ended on the 23rd of December.

The *Second Term* commenced on the 8th of January, 1877, and ended on the 24th of March.

The *Third Term* commenced on the 9th of April, 1877, and ended with the Session, on the 9th of June.

N.B.—The Easter Recess for the Medical Faculty commenced on the Tuesday before Easter, and ended on Easter Monday.

REGISTRAR'S AND BURSAR'S OFFICES.—The Registrar's Office is open from 12 to 1 o'clock on every Tuesday and Thursday, and from 1 to 2 o'clock on every Wednesday and Friday during Term.

The Bursar's Office is open from 12 to 1 o'clock on every Monday, Wednesday, and Friday during Term.

LIBRARY AND MUSEUM.—The Library is open daily to Students between the hours of 9 A.M. and 4 P.M., except on Saturdays, when it is closed at 1 o'clock.

LIBRARY AND MUSEUM.—The Library is open daily to Students between the hours of 9 A.M. and 4 P.M., except on Saturdays, when it is closed at 1 o'clock.

The Museums of Natural History and Geology and Mineralogy are open daily between the hours of 9 A.M. and 3 P.M., except on Saturdays, when they are closed at 12 o'clock. The Anatomical and Pathological Museums are open daily.

B 2

STUDENTS.

The Students of the College are either Matriculated or Non-Matriculated.

MATRICULATED STUDENTS.—To become a *Matriculated Student*, it is necessary to pass the General Matriculation Examination which commenced in the Session of 1876–77, on Tuesday, the 17th of October, 1876, at 9 o'clock, a.m.

Candidates for Matriculation are requested to send their names to the Registrar, at least *three days* before the commencement of the Examination, stating at the same time the Faculty or Department which they propose to enter.

Before being admitted to Examination they are required to pay the *College Fees* for the year, amounting to Ten Shillings for each Faculty or Department. These will be returned, on application, to such as fail to pass the Examination.

No Student will receive a Certificate of Matriculation until he has paid the whole of the *Class Fees* for the Session, and commenced attendance on Lectures.

The following are the Subjects in which Candidates are examined:—

For the Faculties of Arts, Medicine, and Law.

Greek:
    Grammar. (Curtius' Greek Grammar recommended.)
    Any one of the following Authors which the Candidate may select:—
        Demosthenes—Olynthiac Orations.
        Euripides—Alcestis.
        Homer—Iliad, Books I. and II.
        Xenophon—Anabasis, Books I. and II.
        Lucian—Walker's Selections.

Latin:
    Any one of the following Authors which the Candidate may select:—
        Virgil—Æneid, Books I. and II.
        Sallust—Conspiracy of Catiline.
        Cæsar—Gallic War, Book I.

History:
    Outlines of Grecian History. (Smith's History of Greece recommended.)
    Outlines of Roman History. (Liddell's History of Rome recommended.)

Geography:
    Outlines of Ancient and Modern Geography.

English:
    Grammar—
        (1.) The principles of Etymology and Orthography.
        (2.) The leading Rules of Syntax.
    Composition, and writing from dictation.

Mathematics:
    Arithmetic—Principles of Notation. Vulgar and Decimal Fractions. Definition of the term Ratio and Proportion. The Rule of Proportion, with its commercial applications, including Simple Interest.
    Algebra—Including the addition, subtraction, multiplication, and division of Algebraic Expressions, and the solution of Simple Equations.
        Euclid—Books I. and II., with the definitions and axiom.

For the Department of Civil Engineering.

Grammar.

The Outlines of Modern Geography.

Mathematics:
    Arithmetic—Principles of Notation. Vulgar and Decimal Fractions, with the reasons of the different rules. Rule of Proportion, with its commercial applications. Extraction of the Square Root, both of whole numbers and decimals.
    Algebra—Including the addition, subtraction, multiplication, and division of Algebraic Expressions, Fractions, and solution of Simple Equations.
    Geometry—As much as is contained in Euclid, Books I., II., III., IV. Wilson's Elementary Geometry (3rd Edition) is recommended.

NON-MATRICULATED STUDENTS.—Those who desire to attend any of the Lectures in the College may do so, without matriculating, or passing any of the College Examinations, on paying the Fees for those Lectures, together with a College Fee of Five Shillings.

They are entitled to the use of the Library, on subscribing the Library Regulations.

They are not eligible for Scholarships or Prizes, and do not enjoy any of the other privileges of Matriculated Students; but the Professors may recommend the Council to grant Certificates of Honour to the most distinguished.

STUDENTS FROM OTHER COLLEGES.—Students who have pursued part of their studies in one of the Queen's Colleges, or in any University capable of granting Degrees in the Faculties of Arts, Law, and Medicine, are permitted, on producing testimonials of their College standing and conduct, to take corresponding rank in this College, and to compete for Scholarships of the corresponding year; provided that they shall not hold at the same time a Scholarship, or any other office of emolument, in any other University or College.

RESIDENCES.

There is no accommodation for the residence of students within the Colleges, but it is provided by the Statutes that every Matriculated Student, being under the age of Twenty-one Years, shall reside, during the College Terms, with his parent or guardian, or with some relation or friend, to whose care he shall have been committed by his parent or guardian; or in one of the Boarding-houses licensed by the President of the College and arranged for the reception of students, who are then placed under the moral care and spiritual charge of the Deans of Residences of their respective creeds.

The Terms for Board and Lodging are generally at the rate of from £30 to £40 a year.

The following are the Protestant Deans of Residences :—

Church of Ireland,	- - - Rev. George Webster, D.D.
General Assembly of the Presbyterian	
Church in Ireland,	- - - Rev. William Magill.
Wesleyan Methodists,	- - - Rev. John D. Powell.
Non-Subscribing Presbyterians,	- - Rev. W. Whitelegge, M.A.

The Deans are designated as they wish themselves to be called.

FEES.

The Fees paid by Students are of two kinds : Collegiate Fees and Class Fees. The following are the regulations concerning the payment of Fees :

1. All Fees are to be paid to the Bursar, at his Office in the College.

2. Candidates for Matriculation are required to pay their *College Fees* before being admitted to Examination.

3. Students must pay their Class Fees before being admitted to the Classes; and if Candidates for Scholarships, must do so on or before the day previous to the date of Examination.

4. Half the Class Fees are returned to Scholars; but this rule does not extend to Exhibitioners.

COLLEGIATE FEES.—For the First Year the College Fees are *Ten Shillings;* for the Second and subsequent years Five Shillings. Students who wish to borrow books from the Library are obliged to deposit One Pound with the Bursar.

CLASS FEES.—The ordinary fee paid for a course of Lectures is £2. For English and Logic the fee is only £1. For Practical Anatomy, Practical Chemistry, and the first course of Anatomy and Physiology, the fee is £3.

With reference to the Fee payable for repeated attendance on the same Course of Lectures, the following rule has been laid down in the Statutes:—

"The Fees payable by Students, whether Matriculated or Non-matriculated, to the several Professors, for attendance on the several Pass Courses of Lectures or instruction, which are now or may be hereafter prescribed by the College Council, for any Degree or other University distinction, shall be £1 for each

Course extending over one Term only, and £2 for each Course extending over more than one Term of a Session, unless allowed for the first time, and £1 for each re-attendance on the same; except that the Fee payable for the Course of Anatomy and Physiology shall be £3 when attended for the first time, and £2 for every subsequent attendance; except also, that the Fee payable for Practical Anatomy or Practical Chemistry, shall be £3 for each attendance."

In the case of Students receiving special instructions, not prescribed as a qualification for a Degree or other University distinction, or attending Honor Courses of Lectures, the Council shall have power to fix the amount of the Fee to be paid by each Student; provided that the Fee to be paid for any Honor Course of Lectures which Students are entitled to substitute for a prescribed Pass Course, shall in no case be less than £2.

LECTURE HOURS.

Table of the Subjects and Hours of Lectures.

Name of the Class	Mon-day.	Tues-day.	Wed-nesday.	Thurs-day.	Fri-day.	Satur-day.
Senior Greek	9	9	9		10	
Junior Greek	9	9	9		10	
Extra Greek	9		9	10	9	
Senior Latin		10		10		
Junior Latin	10		10	10	10	
Extra Latin	11	11	11	11		11
English Language	11	11		11		10
English Literature		11		11		
History	12		12	12	12	
Medical French	12	12	12	12		
Senior French (*Arts and Engineering*)	1		1		1	
Junior French (*Arts and Engineering*)		2		2		2
German or Italian	2		2		2	
Logic	11	11	11		9	
Metaphysics	1	1		1		10
Political Economy and Jurisprudence	11	11	11	11	11	
Senior Mathematics	1	1	1	1		
Junior Mathematics	12		12		12	
Third Year's Mathematics	2	2	2			
Mathematical Physics	2	2	2			
Mathematical Physics (*Engineering*)	3					
Experimental Physics, Senior	11		11	11	11	
Experimental Physics, Junior	12	12		12		
Engineering Physics	2	2	2	2		
Physics (*None*)	11		11		11	
Chemistry	10	10	10	10	10	
Practical Chemistry*	2		2		2	
Zoology and Botany	3	3	3			12
Geology and Mineralogy	12	12		12		12
Senior Engineering	10	10				12
Junior Engineering	12		12		12	
Geometrical Drawing	10	10				
Office Work (10 till 5)	...	...	...	...	...	...
Anatomy and Physiology	1	1	1	1		
Practical Anatomy	12	12	12	12		
Medicine	3		3	3		3
Surgery	9	9		9		9
Materia Medica	11		11		11	11
Midwifery	12	12		12		12
Medical Jurisprudence	10	10	10	10		
English Law (1st year)	11		11		11	
English Law (2nd year)		11		11		11
English Law (3rd year)	11		11		11	
Jurisprudence	2	2		2		2
Civil Law	11		11		11	
Constitutional and International Law	10	10		10		10

* Whenever it becomes necessary to divide the Practical Chemistry Class, the hours for the Second Class are at two on Tuesday and Thursday, and eleven on Saturday.

COLLEGE SCHOLARSHIPS.

There are at the disposal of the Council Forty-six Junior and Eight Senior Scholarships.

The former are held by Students who have not yet taken the Degree of B.A.; the latter by Students who have obtained the Degree of B.A.

Of the Junior Scholarships:—

Thirty, of the value of £24 each, are appropriated to the Faculty of Arts. (See p. 34.)				
Five,	,,	,,	£20 ,,	School of Engineering. (See p. 40).
Eight,	,,	,,	£25 ,,	Faculty of Medicine. (See p. 48).
Three,	,,	,,	£20 ,,	Faculty of Law. (See p. 43).

Of the Senior Scholarships:—

Seven, of the value of £40 each, are appropriated to the Faculty of Arts. (See p. 34.)			
One,	,,	,, £40 ,,	Faculty of Law. (See p. 43).

All these Scholarships are tenable for only one year, with the exception of the Scholarships of the Second Year in Arts, which are tenable for two years.

Conditions of Candidature and Tenure.

1. Candidates for Scholarship are required to pay on or before the day previous to the date of Examination, the College and Class Fees for the year in the corresponding Faculty. They must also procure a certificate to that effect from the Bursar, and be prepared to shew it on their admission to Examination.

2. Scholarships of any year are tenable by Students who have duly completed the previous part of their Course by attending the requisite Courses of Lectures, and passing the ordinary College and University Examinations.
   Note.—In the case of candidates for Scholarships in the Faculty of Medicine, in which the Curriculum is not obligatory, the Council reserve to themselves the power to decide in the case of each candidate, whether his previous course of study has been sufficient to render him eligible.

3. A Student, as a rule, cannot hold two Scholarships at once; but if he be a Candidate for both the Junior Scholarships in Arts of the same year, and stand first on each list, he may hold both the Scholarships.

4. Half the ordinary Class Fees are returned to Scholars.

5. Scholars must complete their attendance during the Session, pass the Sessional Examinations, and observe such rules as the Council may from time to time enact.

6. In the Faculty of Medicine, Scholars must attend the Classes recommended for their year of study, in the order of the Curriculum.

7. Scholars and Exhibitioners have certain statutory duties; such as taking charge of the Class-rolls, registering the attendance of the Students, assisting the Professors in the maintenance of discipline and good conduct in the Students, and for the general business of the College.

[TABLE.

Appendix I.
No. I.
General Regulations of College, &c.

TABLE OF THE TIMES AND SUBJECTS OF THE SCHOLARSHIP EXAMINATIONS FOR THE SESSION 1876–77.

Examination Days.	From 9 to 12 o'clock.	From 2 to 5 o'clock.
Thursday, October 18th,	Geometrical Drawing. Surveying.	Geology and Mineralogy. Surgery.
Friday, October 19th,	Latin. Chemistry.	Mathematics. Practical Chemistry. Midwifery.
Saturday, October 20th,	Modern Languages. Political Economy. Mathematics (Geometry Paper).*	Pathology. Latin.
Monday, October 22nd,	Greek. Materia Medica. Medical Jurisprudence.	Greek. Zoology and Botany. Practical Anatomy. History and English Lit. (*Senior Scholarship.*)
Tuesday, October 23rd,	English Language, History and Geography (1st year). English Language, &c. (2nd and 3rd years). Natural Philosophy.	Anatomy and Physiology. Logic and Metaphysics.
Thursday, Nov. 29th, *	English Law.	Civil Law.

* The University Prizes in Geometry were decided on this paper, which was also taken into account in deciding the first year's Mathematical Scholarships.

COLLEGE EXHIBITIONS AND PRIZES.

The Council are authorized to grant in certain cases Exhibitions to Candidates who may have failed to obtain Scholarships at the Scholarship Examination.

In the last week of October is held an Examination for a Prize in Ancient History. Subjects recommended for study: Rawlinson's Translation of Herodotus (the text only); Liddell's History of Rome; the Students' Gibbon, Chapters 1–3.

In May and June are held General Examinations in the subjects lectured upon during the Session; and Prizes of Books are awarded by the Council to the most distinguished Students in each Class.

Three Exhibitions, each of the value of £15, one in Practical Medicine, one in Practical Surgery, and one in Practical Midwifery, were offered for competition at the close of the Lectures in the Faculty of Medicine for the Session of 1876–77.

UNIVERSITY EXHIBITIONS AND PRIZES.

Exhibitions and Prizes are also given by the Senate of the University to Students, in the Faculties of Arts and Medicine, and in the School of Engineering, who shall most distinguish themselves at the various University Examinations.

FACULTY OF ARTS.—The following are to be competed for immediately after General Matriculation:—

Two Prizes for English Prose Composition and two for Geometry, given annually by the Senate of the University. The First Prize in each is £3 worth of books; the second £2 worth of Books.

The subjects of Examination for the University Geometry Prizes are:—

The first Four and Sixth Books of Euclid, with Definitions of the Fifth Book, and Geometrical deductions.

These Prizes are open to Students who have just passed the Matriculation Examination for the first time.

Three Exhibitions of £20 a year for three years, three Exhibitions of £15 a year for three years, and two Exhibitions of £10 a year for three years, will be competed for annually in the Faculty of Arts. The three £20 Exhibitions will be awarded to the Candidates who stand foremost in order of merit from each College, at the first University Examination in Arts; and the three £15 Exhibitions to the Candidates who stand second in order of merit from each

Appendix A.

No. I.
General
Regulations
of College,
&c.

College; provided that their names appear in the First Class of the Division List at that Examination. Of the two £10 Exhibitions, one will be awarded to the best answerer in Mathematical Science, and the other to the best answerer in the Ancient Classics, at the first University Examination. The £10 Exhibitions are open to the competition of Candidates from all the Colleges, and of Graduates may be held along with one of the larger Exhibitions.

Each Candidate will be deemed a Student of that College in which he shall have attended the Lectures of the second Session; and no Student will be admitted to the competition who shall have allowed more than one academic year to intervene between the time that he entered upon the studies of the second Session and the time of competition.

The first Instalment of each Exhibition will be paid at the time of competition; the second when the Graduate takes the Degree of B.A. in the Queen's University; provided he graduate with honors, and within two academic years; and the third when he takes the Degree of M.A. in the Queen's University, provided the third when he takes the Degree of M.A. in the Queen's University, provided he obtain it within three academic years from the time of competition.

University Prizes in Composition, open to the Competition of Graduates and Undergraduates.

Two Prizes for English Prose Composition, one of £10 worth of Books, and the other of £5 worth of Books, have been founded, and are open to the competition of all members of the University who shall not have been graduates for more than three years at the time of competition, and who shall not have already twice obtained one or other of these Prizes.

University Prizes in Composition, open to the Competition of all Undergraduates.

Two Prizes in Composition, one for English Prose, the other for Greek or Latin Prose, and each consisting of £5 worth of Books, have been founded, and are open to the competition of all undergraduates, provided that neither the English nor the Classical Prize be awarded oftener than twice to any Student.

FACULTY OF MEDICINE.—Two exhibitions, one consisting of two instalments of £20 each, and the other of two instalments of £14 each, will be competed for annually in the Faculty of Medicine. These exhibitions will be awarded for proficiency in the non-professional part of the first University Examination in Medicine: the £20 exhibition to the best answerer absolutely, in whichever of the College he may have been educated; and the £14 exhibition to the candidate who is first in point of merit of the competitors from the other two colleges; date who is first in point of merit of the competitors from the other two colleges; provided that their names appear in the First Class of the Division List at that examination.

Each Candidate will be deemed a student of that College in which he shall have attended the Lectures of the second session; and no student will be admitted to the competition who shall have allowed more than one year to intervene between the time that he entered on the studies of the second year or the time of competition. The two exhibitions in Medicine will be paid in two equal instalments: one at the time of competition; the other when the exhibitioner takes the Degree of M.D. in the Queen's University, provided that he graduate with honors, and within three academic years from the time of competition.

Prize in Composition, limited to the Competition of Undergraduates in Medicine.

A prize of £5 worth of books has been founded, for a thesis on a subject to be prescribed, and is limited to the competition of the Undergraduates in Medicine who shall not have already twice received the prize.

The subjects on which the competitors for composition prizes are to write, will be announced on or before the first of June in each year; the composition, with distinctive signatures, are to be sent in to the Secretary of the University, with distinctive signatures, are to be sent in to the Secretary of the University, city, on or before the first of the following September, and the successful competitors will be declared at the next Public Meeting of the University.

SCHOOL OF ENGINEERING.—Two Exhibitions, one of £20 a year for two years, and the other of £15 a year for two years, will be competed for annually in the and the other of £15 a year for two years. These Exhibitions will be awarded at the first University Examination in Engineering: the £20 Exhibition to the best answerer

Appendix. absolutely, in whichever of the Colleges he may have been educated, and the £15
No. 1. Exhibition to the Candidate who is first in order of merit of the competitors
General from the other two Colleges; provided that their names appear in the First Class
Regulations of the Division List at that Examination.
of College,
&c. Each Candidate will be deemed a Student of that College in which he shall
have attended the Lectures of the second Session; and no Student will be ad-
mitted to the competition who shall have allowed more than a year to intervene
between the time that he entered on the studies of the second year and the time
of competition.

The first instalment of each Exhibition will be paid at the time of competition;
the other when the Exhibitioner takes the Diploma in Engineering of the
Queen's University, provided that he take honors with it, and obtain it within
two academic years from the time of competition.

OTHER PRIZES.

The Early English Text Society's Prizes.

With a view to the encouragement of the study of Early English, the Early
English Text Society has kindly offered for the competition of the Students of
Queen's College, Cork, valuable prizes consisting of the rare works in Early
English published under its auspices.

An examination for these prizes was held on the 23rd of April, 1877, and
was open to all Matriculated Students of the College who were not Graduates
at that date, the following being the course appointed:—

1. Outlines of the History of the English People, to the accession of Henry IV.
2. The History of English Literature, to the death of Chaucer.
3. Outlines of Anglo-Saxon Grammar (Rask recommended).
4. Morris.—English Accidence, Caps. III., IV., and V.
5. Chaucer.—The Prologue to the Canterbury Tales.

The New Shakspere Society's Prizes.

The New Shakspere Society in order to encourage the study of Shak-
spere's works, and of the English Drama, has also offered copies of the works
published by it as Prizes for competition among Students of the College.

An examination for these prizes was held on the 23rd April, 1877, and was
open to all Matriculated Students of the College who were not Graduates at
that date. The following was the course appointed:—

    1. The History of the English Drama (in outline).
    2. The Literary History of the Elizabethan Age.
    3. A critical knowledge of Much Ado about Nothing.   II. Richard III.
    III. King Lear.   IV. Timon of Athens.

See Appendix D., pp. 118–119, for the Examination Papers set to Candi-
dates for these Prizes at the last Examination.

DEGREES.

The Certificates, Diplomas, and Degrees granted by the Senate of the Queen's
University are as follows:—

In the Faculty of Arts—
     The Diploma of Licentiate.
     „   „ Degree of Bachelor (B.A.)
     „   „   „   Master (M.A.)
In the Faculty of Law—
     Certificate of the Law Professors.
     The Diploma in Elementary Law.
     „   „ Degree of Bachelor (LL.B.)
     „   „   „   Doctor (LL.D.)
In the Faculty of Medicine—
     The Degree of Doctor (M.D.)
     „   „   „ Master in Surgery (M.Ch.)
     „   „ Diploma of Midwifery.
In the School of Civil Engineering—
     The Degree of Bachelor (S.E.)

No. II.—FACULTY OF ARTS.

DEGREES.

1. DEGREE OF B.A.*

Students intending to proceed to this degree in the Queen's University must matriculate in one of the Queen's Colleges, and complete the course of study prescribed by the University Senate, by attending the College Lectures in each Session, and passing the Sessional Examinations.

The B.A. Examination takes place in the Sessional after the close of the third Session, and Candidates must have previously passed the "First Examination in Arts," a preliminary examination which takes place at the commencement of the Third Session.

Course for the Degree of Bachelor in Arts.

Candidates for the Degree of Bachelor in Arts are required—

1. To have been admitted Matriculated Students of the Queen's University in the Faculty of Arts.
2. To have subsequently studied in one of the Colleges of the Queen's University the Course herein prescribed.
3. To have passed the University Examinations herein prescribed.

The Course for the Degree of Bachelor in Arts shall extend over three Sessions, and shall comprise attendance on the following curriculum :—

FIRST SESSION.

English (One Term).	A Modern Continental Language.
Greek.	Mathematics (First Course).
Latin.	

SECOND SESSION.

Logic (One Term).	Natural Philosophy.

Along with any two of the following :—

Greek (Second Course).	Modern Continental Languages (Second Course).
Latin (Second Course).	Mathematics (Second Course).

THIRD SESSION.

English Language and Literature.	Chemistry.
Metaphysics, or History, or Political Economy (Two Terms).	Zoology, or Botany.

Attendance on these Courses shall, in all cases, be understood to include passing such examinations as may be appointed by the College Council, and the catechetical parts of the Courses of Lectures.

Candidates for the Degree of Bachelor of Arts shall reside at their respective Colleges during at least the first two terms of each Session, but may be exempted from residence during the third term by a special grace of the College Council.

Third year's Students may undertake attendance on one or two Courses of Honor Lectures, for a like number of the Courses above set down for study in the third Session.

Candidates for the Degree of Bachelor in Arts shall pass two University Examinations,—a Preliminary and a Degree Examination.

The Course for the Preliminary Examination shall include Greek, Latin, a Modern Continental Language, and Mathematical Science. Students who have completed their second Session must pass this Examination before rising to the third year, unless prevented by illness or other inevitable accident, in which case the Senate may admit them to a Supplementary Examination.

Candidates who have completed the Undergraduate Course, may either themselves at the Degree Examination for graduation either with Honors or without Honors.

If they seek to graduate with Honors, they may select for their Examination any one of the following groups :—

Greek and Latin.	Experimental Science.
Modern Continental Languages.	Natural Science.
Mathematical Science.	

* Degrees in Arts, conferred by the Queen's University in Ireland, are recognised in the University of Durham, by St. Bees College, Whitehaven, and by St. Aidan's College, Birkenhead, in the case of Theological Students preparing for Holy Orders in the Established Church.

His Royal Highness the Commander-in-Chief has approved of Graduates of the Queen's University being in future exempted from the usual Examination for direct Commissions; and also of the First University Examination being accepted in lieu of that for the Royal Military College, Sandhurst.

Or any three of the following :—

English Language and Literature.	Political Economy.
Metaphysics.	Logic.
History.	

Candidates who seek the Degree without Honors, may select for their Examination any group of the subjects from the following list, provided the sum of the numbers attached in this list to the selected subjects be at least four:—

English Language and Literature,	.	2	Latin,	.	.	.	1
Mathematical Science,	.	.	2	Each Modern Continental Language,	1
Experimental Physics,	.	.	2	Logic,	.	.	.	1
Chemistry,	.	.	.	2	Metaphysics,	.	.	1
Zoology,	.	.	.	1	History,	.	.	1
Botany,	.	.	.	1	Political Economy,	.	1
Greek,	.	.	.	1		

English Composition with form a part of all University Examinations.

2. DEGREE of M.A.

Candidates for the Degree of M.A. are admitted to the University Examinations for that Degree one year after having taken the Degree of B.A.

Courses for the Degree of Master in Arts.

Bachelors in Arts of one year's standing, may offer themselves for Examination for the Degree of Master in Arts, and may select for their Examination any one of the following groups :—

Greek and Latin.	Experimental Science.
Modern Continental Languages.	Natural Science.
Mathematical Science.	

Or any three of the following :—

| English Language and Literature. | Political Economy. |
| Metaphysics. | Logic. |

This Ordinance supersedes former Ordinances prescribing the curriculum for the Degree of Master in Arts.

LECTURES.

The Lectures in this Faculty for the Session 1876–77, commenced on *Monday, the 23rd October,* 1876.

The following Table shows the days, hours of Lectures and fees for the ordinary courses. In accordance, however, with the regulations of the University for the Degree of B.A., Students may substitute for one or two Courses in the third year a like number of Honor Courses:—

	CLASS.	Term.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Fees.
									£ s. d.
First Session.	English,	2	—	11	—	11	—	10	1 0 0
	Greek,	1, 2, 3	10	—	9	10	—	9	2 0 0
	Latin,	1, 2, 3	9	10	10	10	—	—	2 0 0
	Modern Languages,	1, 2, 3	2	—	12	—	12	—	2 0 0
	Mathematics (1st Course)	1, 2, 3	12	—	12	—	12	—	2 0 0
	College Fee,								0 10 0
Second Session.	Logic,	2	—	11	—	11	—	9	1 0 0
	Natural Philosophy,	1, 2, 3	11	—	11	—	11	—	2 0 0
	Greek [2nd Course],	1, 2, 3	9	9	10	—	9	9	2 0 0
	Latin	1, 2, 3	10	—	9	—	10	—	2 0 0
	Modern Languages	1, 2, 3	1	—	2	—	1	—	1 0 0
	Mathematics	1, 2, 3	2	—	2	—	2	—	2 0 0
	College Fee,								0 5 0
Third Session.	English Language and Literature,	1, 2	—	12	—	12	—	11	2 0 0
	Chemistry,	1, 2, 3	11	—	11	—	11	—	2 0 0
	Metaphysics, or	1, 2	—	1	—	1	—	10	
	Logic, or	1, 2	12	—	12	—	12	—	1 0 0
	Political Economy,	1, 2	—	11	—	11	—	—	
	Zoology or Botany,	1, 2	3	—	3	—	3	—	2 0 0
	College Fee,								0 5 0

HONOR COURSES.

By the regulations of the University Senate, a Student of the third year may substitute for two courses in the ordinary curriculum the same number of honor courses.

Under this Regulation Candidate are at liberty to substitute one or two of the following courses for a like number of the courses set down in the above table for study in the Third Session, viz. :—

Greek,	Geology & Physical Geography,
Latin,	French,
Pure Mathematics,	German,
Mathematical Physics,	Italian,
Experimental Physics,	Logic ;

provided that the Rules of the College Council admit of their making this substitution, and provided further that the courses substituted are courses specially preparing Students for one or more of the Honor Examinations for the degree of B.A.

Candidates are allowed under the same conditions to attend Honor Courses on two of the subjects, Metaphysics, History, and Political Economy, as two of the courses of the Third Session. Candidates who avail themselves of this permission are at liberty to attend the third of these subjects as another course of the Third Session.

A similar interpretation applies to the courses of Botany and Zoology, which will count as two courses of the Third Session, provided that one of them be an Honor Course, attended under the conditions stated above.

OUTLINES OF THE COURSES OF LECTURES DELIVERED BY THE PROFESSORS OF THE FACULTY OF ARTS.

LITERARY DIVISION OF THE FACULTY OF ARTS.

The Greek Language.

Professor, E. VAUGHAN BOULGER, M.A.

Junior Class : Monday, Wednesday, Thursday, and Friday.
    Xenophon—Anabasis, Book IV. Euripides—Alkestis.
Second Year : Monday, Tuesday, Wednesday, and Friday.
    Homer—Odyssey, Books I. to IV. Euripides—Hippolytus.
    Demosthenes—In Midiam.
Third Year : Tuesday, Thursday.
    Aristophanes—Aves. Plato—Protagoras. Thukydides, Book IV.

Exercises in Prose and Verse, according to the proficiency of the Students.

The Latin Language.

Professor, BUNNELL LEWIS, M.A., F.S.A.

Senior Class, Monday, Wednesday, and Friday;
    Cicero—Tusculan Disputations, II.
    Terence—Phormio.
Junior Class, Monday, Tuesday, Wednesday, and Thursday;
    Horace—Epistles, beginning at Book I, Ep. 11.
    Cicero—Tusculan Disputations, II.
Exercises in both Classes chiefly from Arnold's Introductions to Latin Composition.
Extra and Third Year's Class, Tuesday and Thursday;
    Cicero—Pro Sestio.
    Lucretius—Book V.
In this Class special attention is paid to original Composition, and to translation from English Authors into Latin.

History, the English Language and English Literature.

Professor, GEORGE FRANCIS ARMSTRONG, M.A.

1st and 2nd }　History—Monday, Wednesday, and Friday.
　Term. }
2nd Term—The English Language—Tuesday, Thursday, and Saturday.
1st and 2nd }　English Literature—Tuesday, Thursday, Saturday.
　Term. }

History :

European History—From the Decline of the Roman Empire to the present time.

THE ENGLISH LANGUAGE.

The History of its development.

Books recommended :—
　Morris—Historical Outlines of English Accidence.
　Trench—Study of Words; English, Past and Present.
　Marsh—Lectures on the English Language.
　Rask—Anglo-Saxon Grammar (edited by Thorpe) ; or Vernon—
　　　　Anglo-Saxon Guide.
　Thorpe—Analecta Anglo-Saxonica.
　Morris and Skeat—Specimens of Early English.
　Morris—The Prologue to Chaucer's Canterbury Tales, and the
　　　　Editor's Introduction.
　Skeat—Specimens of English Literature.
　Rushton—Rules and Cautions in English Grammar.
　Max Müller—Science of Language.
　Whately—Elements of Rhetoric.
　Campbell—Philosophy of Rhetoric.

Essays and Translations will be required of the Students from time to time.

ENGLISH LITERATURE.

History and Criticism of the Literature of England from the earliest period to
　　the present day.
The Lives of the Great English Writers.
The Epochs of Foreign Literature which have most affected the form and spirit
　　of the Literature of England.

Books recommended :—
　Morris—A First Sketch of English Literature.
　Shaw—Manual of English Literature (edited by Dr. Smith).
　Craik—History of English Literature.
　Chambers—Cyclopædia of English Literature.
　Hallam—Introduction to the Literature of Europe.
　Taine—History of English Literature, translated by H. Van
　　　　Laun.

Critical Essays on subjects treated of in the Lectures will be required of the
　　Students at set times.

Modern Languages.

Professor, R. DE VERICOUR, M.A.

French Class (1st Division), Mondays, Wednesdays, and Fridays, at 12 o'clock.
　Do.　　(2nd Division), Mondays, Wednesdays, and Fridays, at 1 o'clock.
　Do.　　(3rd Division), Mondays, Wednesdays, and Fridays, at 2 o'clock.
German or Italian, Tuesdays and Fridays, at 2 o'clock.

TEXT BOOKS.

French—Textes classiques de la Littérature Française, par. S. Demogeot.
　Fables de Lafontaine. Histoire de la Révolution Française, par Mignet.
　Histoire de la Littérature Française, par Demogeot. Weekly Lectures on
　the Grammar and Idioms.
Italian—Silvio Pellico. Tasso. Extracts from Macchiavelli, Guicciardini,
　Manzoni. Weekly Lectures.
German—Goethe's Ballads and Iphigenie. Schiller's Wilhelm Tell. National
　Literatur, von A. F. Villaur. Weekly Lectures.

SCIENCE DIVISION OF THE FACULTY OF ARTS.

Mathematics.

Professor, CHARLES NIVEN, M.A.

Junior Class, Monday, Wednesday, and Friday.
Subjects—Arithmetic, Algebra, Geometry, and Plane Trigonometry.

Second Year's Class, Monday, Wednesday, and Friday.
Subjects—Analytical Geometry, Trigonometry, Differential and Integral Calculus.

Third Year's Class :
Subjects—Geometry of three dimensions, Differential Equations, &c.
Exercises are regularly set in each of the Classes.

Logic and Metaphysics.

Professor, GEORGE SIDNEY READ, M.A.

2nd Term,   Logic,   Tuesday, Thursday, and Saturday.
1st & 2nd Terms, Metaphysics,   Do.   do.   do.

LOGIC.

This Course consists of :—

I.—Lectures, Examinations, and Exercises in Aldrich's Compendium of Logic, occupying the early part of the Term, &c.

II.—A full discussion of Classification, the Theory of Hypothetical Syllogisms and of Induction, and the Analytic of Logical Forms, as contained in the works of Mill, Whately, Thomson, and Bayes.

Throughout the Course the Students will be expected to familiarize themselves with the reduction of arguments to their strict Logical Form by written exercises; which will be examined by the Professor.

METAPHYSICS.

This Course will embrace :—

I.—The Philosophy of the Inductive Sciences, illustrated by reference to Lord Bacon, Whewell, and Mill ; and—

II.—The History of Mental Philosophy, comprising—
   1st—The origin, progress, and development of Modern Philosophy anterior to the rise of the Scottish School.
   2nd—A critical examination of the works of the more celebrated writers of that School.
   3rd—A brief view of the present state of Philosophy in the British Islands and on the Continent.

Political Economy.

Professor, RICHARD HUSSEY MILLS, M.A.

Political Economy—The nature and distribution of wealth, the principles which regulate Rents, Profits, and Wages; the Principles of Commerce, of Taxation, of the Funding System, and of Currency and Banking.

Books recommended :—
Adam Smith—Wealth of Nations.
Senior—Political Economy.
Fawcett—Manual of Political Economy.
John Stuart Mill—Political Economy.
Richard H. Mills—Lectures on Currency and Banking (Second Edition).
M'Culloch—Taxation and Funding (Third Edition).
Goschen on Foreign Exchange.

The Course consists of Twenty-four Lectures, delivered in the months of December, February, and March; the Students are required in the intervals to prepare the subjects which will be pointed out by the Professor.

Chemistry.

Professor, MAXWELL SIMPSON, B.A., M.D., F.R.S.

Monday, Wednesday, and Friday.

The Course is divided into Inorganic and Organic Chemistry.

In the first part are discussed the Laws of Combination and Affinity, Molecular Chemistry and Crystallography, and the History of the Non-Metallic and Metallic substances.

In the Organic portion of the Course will be considered the subjects of Organic Analysis, Organic Series, Compound Radicals and Types, Metamorphosis of Organic Bodies, History of special natural and Vegetable Bodies.

In treating of the Laws of Chemistry and the History of Inorganic and Organic Bodies, those points will be chiefly dwelt upon which have a practical bearing in the Arts, Medicine, Engineering, and Agriculture. During the Course, attention will be directed to the application of Chemistry to Medicine and Physiology; to Metallurgic Operations, Chemical Manufactures, Building Materials, Soils, Manures.

Fee, for each Chemical course, £2. Each subsequent Course in Medicine, £1.

Text Books recommended.—Williamson, Fownes, Williams, Miller, Regnauld, Nacquet; Schorlemmer's Chemistry of Carbon Compounds; Galloway—Qualitative Analysis; Bowman—Practical Chemistry; Armstrong—Organic Chemistry.

Analytical Chemistry:

The Chemical Laboratory is open daily, except on Saturdays, from 10 to 4 o'clock, under the superintendence of the Professor, to students desirous of presenting an extended course of qualitative and quantitative analysis, and for the purpose of original investigation in connexion with the arts, or in the higher departments of Scientific Chemistry.

Natural Philosophy.

Professor, JOHN ENGLAND, M.A.

Experimental Physics (Senior):

Text Books—Newth's Mechanics; Galbraith and Haughton's Manuals of Astronomy and Optics; Jamin, Traité Du Physique.

Experimental Physics (Junior):

Text Books—Ganot, Traité de Physique.

Mathematical Physics :

Text Books—Duhamel's Mécanique. Parkinson's Optics. Brinkley's Astronomy.

Engineering Physics :

Text Books—Tate's Exercises in Mechanics; selections from the works of Mosely, De Pambour, Weisbach; Twisden's Practical Mechanics, &c.

Natural History.

Professor, JOSEPH REAY GREENE, B.A., M.D.

Monday, Wednesday, and Friday.

The Professor of Natural History delivers a course of Lectures on Zoology and Botany.

Students may obtain Certificates of Attendance on either or both of these subjects. The Zoological part of the course will extend from the first Lecture-day in November to the end of February. The Botanical Lectures will occupy the remainder of the Session.

Under Zoology will be discussed the Principles of Biology.

ZOOLOGY.

GENERAL ZOOLOGY.—Advantages, data, methods, definition and divisions of the science. Animal morphology and physiology. Systematic zoology.

GENERAL ANATOMY.—The classes of animals ; simple and compound tissues ; systems of simple tissues ; inner and outer tissues ; lower and higher tissues. Indifferent tissues ; epithelial tissues ; connective tissues ; contractile tissues ; nervous tissues.

PHYSIOLOGICAL ANATOMY AND SPECIAL PHYSIOLOGY.—The organism, its apparatus, organs (compound, simple, and elementary), and composing units. Structure and function; modes of function. The organism, as dependent on supplies of energy from without and the action of incident forces; transmutations of energy affected by the organism; internal and external work. Organs of nutrition; various purposes thereof. Organs of assimilation—the blood; organs of circulation and magnification; organs of respiration; organs of assimilation of organs of secretion. The nervous system and organs of sense. Organs of motion and support. Electric organs. Organs of generation.

HOMOLOGIES OF ANIMALS.—Type or plan of structure; the relative position of parts. Morphological units. Antimeres. Metameres and parts of metameres. Layers of the germ and their derivatives. Outgrowths and other processes. Anterior and posterior, right and left, dorsal and ventral, neural and hæmal, actinal and abactinal regions.

STRUCTURAL MORPHOLOGY.—Forms of simple animals, as resulting from their (a) symmetry, (b) predominant directions of growth, and (c) the production of external processes. Asymmetrical animals. The principal modes of animal symmetry—symmetry of the point, of the line, and of the plane; intermediate forms; doubly symmetrical animals. The various forms of compound animals.

DEVELOPMENT OF ANIMALS (ONTOGENY).—Embryogenesis and metagenesis. Direct development. Development with metamorphosis. Fission. Germination. Alternation of generations. Pædogenesis. Other modes of development. Ontogeny in relation to animal morphology.

THE HIGHER PHYSIOLOGY.—Law of Inheritance. Variation of animals. Distribution. Animal Palæontology—appearance, succession, extinction. Origin of species; phylogeny; relation of phylogeny to ontogeny.

ZOOLOGICAL CLASSIFICATION.—Its object, data, difficulties, methods, and results. Characters of animals. Groups of animals. Zoological nomenclature. Definition of animal groups. Verification of zoological systems.

INVERTEBRATE ANIMALS.—Protozoa and Metazoa (Cœlentera and the higher Invertebrata). Classes of Invertebrata —Rhizopoda, Gregarina, Infusoria, Spongia, Hydrozoa, Anthozoa, Ctenophora, Echinoderma, Heteropoostrea, Gephyrea, Nematelminthea, Rotatoria, Platyhelminthea, Annulata, Crustacea, Insecta, Cephalopoda, Cephalophora (Heteropoda, Gasteropoda, Pteropoda and Scaphopoda), Lamellibranchiata, Brachiopoda, and Bryozoa. The provinces of the higher Invertebrata—Echinoderms, Helminthea, Annulata, Arthropoda, and Mollusca.

VERTEBRATE ANIMALS.—Comparison with Invertebrata. Doubtful position of Tunicata. Classes of Vertebrata—Fishes, Batrachians, Reptiles, Birds, and Mammals. Provinces of Vertebrata—Branchiata (or Ichthyopsida), Monocotyla (or Sauropsida), and Vivipara.

BOTANY.

GENERAL BOTANY.—The parts of plants: Protoplasm and vegetable cells; Tissues of plants. Life of plants. Classification of plants. Distribution of plants.

CRYPTOGAMIC BOTANY.—Cryptogams: Algæ; Mycetes; Mosses and allied plants; Vascular Cryptogams. Homologies of Cryptogams.

GENERAL MORPHOLOGY OF PHANEROGAMS.—The Stem. Buds and Branches. Roots. Leaves. Flowers. The Fruit and Seed. Homologies and development of Phanerogams.

SPECIAL MORPHOLOGY OF PHANEROGAMS.—Gymnosperms and Angiosperms. Dicotyledons—Thalamifloræ; Calycifloræ; Corollifloræ; Gamopetalæ; Apetalæ. Monocotyledons—Epigynous Monocotyledons; Apogynous Monocotyledons.

Those who wish fully to profit by these Lectures would do well to read, before attending them, Huxley's Lessons in Elementary Physiology; Mivart's Lessons in Elementary Anatomy; and Oliver's Lessons in Elementary Botany.

Geology and Mineralogy.

Professor, ROBERT HARKNESS, F.R.S.L. & E., F.G.S.

Tuesday, Thursday, and Saturday.

General Structure of the Earth; the causes at present in operation which modify its surface; Nature of Rocks which enter into composition with the crust of the Globe; description and classification of Sedimentary Deposits;

C

Organic Remains; Physical Geography of the Earth during the several geological epochs; characters and modes of Igneous, Plutonic, and Metamorphic Rocks; Mineral Veins—their contents and mode of occurrence; application of Geology to Engineering and Mining.

Forms, Structure, Physical and Chemical characters of Minerals; descriptions of the most important simple minerals—circumstances and conditions under which they are found.

Text Books—Lyell's Students' Elements of Geology—Herschell's Physical Geography—Nicol's Manual of Mineralogy.

SCHOLARSHIPS.

In the Faculty of Arts, there are Thirty Junior and Seven Senior Scholarships. Of the former there are awarded—

To Students of the first year, 5 in Literature and 5 in Science.

second „, 5 „ „ „ „ 5 „ „

The Scholarships of the second year are held for two years under certain conditions.

The Senior Scholarship in Arts are tenable only by Graduates of less than two years' standing from the time of taking the Degree of B.A. They are thus appropriated:—

One in the Languages, Literature, and History of Ancient Greece and Rome.

One to Modern Languages, Literature, and History, viz., English Language, Literature, and Composition; European and English History; the French Language, with German or Italian.

One to Mental and Social Science, viz., Logic, Metaphysics, and Political Economy.

One to Mathematics, viz., Pure Mathematics.

One to Natural Philosophy, viz., Experimental Physics and Mixed Mathematics.

One to Chemistry, viz., Theoretical and Practical Chemistry.

One to Natural History, viz., Zoology and Botany, Geology, and Physical Geography.

Subjects of Examination for Literary Scholarships of the First Year.

The Greek Language:
Homer—The Iliad, Books I., II., III., IV., V., and VI.
Euripides—Hecuba.
Herodotus, Book II.
Xenophon—The Anabasis, Books I., II., III.
Greek Prose—Translation of short sentences from English into Greek.

The Latin Language:
Virgil—First six Books of the *Æneid* ; the Georgics.
Horace—First two Books of the Odes, the Satires, and the Epistles, Books I., II.
De Senectute, De Amicitiâ.
Sallust—Conspiracy of Catiline, and Jugurthine War.
Cæsar—The Gallic War, Books V., VI.
Latin Prose—Re-translation from English into Latin, of portions of Cicero.
N.B.—The Examination in Greek and Latin was conducted partly *viva voce*, and partly by printed questions.

The English Language:
Original Essays on subjects proposed by the Examiner.
English Grammar (Bain's English Grammar recommended).
English Language—Craik's Outlines of the History of the English Language.

History and Geography:
Grecian History to the Death of Alexander the Great (Smith's History of Greece recommended).
Roman History to the Accession of Augustus (Liddell's History of Rome recommended).
Outlines of Ancient and Modern Geography.
Modern Geography (Clyde's School Geography recommended).

Subjects of Examination for Literary Scholarships of the Second and Third Years.

The Greek Language:
Sophocles—Oedipus Rex.   Herodotus, Book I.
Plato—Phædon.

    Prose Composition.

The Latin Language:
Virgil—Eclogues and Æneid.   Juvenal—Satires I., III., VIII., X.,
Horace.   XIII., XIV.
Terence—Heauton Timorumenos.   Livy, Book IV.
Cicero—Tusculan Disputations.   Tacitus—Histories, Book I.
    Composition in prose and verse.

The English Language:
Morris—Historical outlines of English Accidence, Chaps. I., II., III., IV., V.
Rask—Anglo-Saxon Grammar, edited by Thorpe.
The English of Chaucer, as illustrated by the Prologue to the Canterbury
    Tales. Morris's Edition, with the Editor's Introduction.
The History of the English People, to the accession of Henry IV.
English Composition.

The French Language:
Molière—L'Avare; Le Misanthrope.
Lafontaine—Fables.
Histoire de la Littérature Française, par Demogeot.
Translation from English into French.

Subjects of Examination for Science Scholarships of the First Year.

Arithmetic.
Mensuration of Rectilineal Figures and of the Circle.
Algebra:
    The Solution of Simple and Quadratic Equations, with one or more unknown
    quantities. Easy questions in the application of Algebra to Geometry.
    Arithmetical and Geometrical Progressions. The nature of Logarithms.
Euclid:
    Books I., II., III., and IV., with deductions. .
Trigonometry:
    Definitions of the Sine, Tangent, &c., of an angle. The easier analytical for-
    mulæ. The Solution of Plane Triangles, with demonstrations. Nature and
    Use of the Tables.

Subjects of Examination for Science Scholarships of the Second and Third Years.

The Higher Arithmetic, with Mensuration.

Algebra:
    The Solution of Equations, with one or more unknown quantities. Elimination.
    Theory and use of Logarithms. Theory of Equations. Binomial and Expo-
    nential Theorems. Compound Interest and Annuities.
Geometry:
    Euclid, Books I., II., III., IV., VI.; Definitions of Book V., and first 21
    Propositions of Book XI., with deductions. Analytical Geometry.
Trigonometry:
    The Solution of Plane Triangles, with demonstrations of the formulæ. Theo-
    rems relating to single arcs. Theorems relating to the sums and differences
    of arcs. Application to heights and distances.

For the Senior Scholarships in the Greek and Latin Languages, and Ancient History.*

The Greek Language:
Thucydides, Book III.   Demosthenes—De Corona.
Theocritus—The Idylls.   Composition in Attic Prose and
Theophrastus—The Characters.   Verse.
Sophocles—Antigone.   History, from B.C. 431 to B.C. 323.

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* Where more than one subject enters into the examination for Senior Scholarships, a competent
knowledge of all these subjects is required from the successful candidate.

Appendix A.
No. II.
Faculty of Arts.

The Latin Language:

Virgil.	Cicero—De Oratore.
Horace.	,, Tusculan Disputations.
Lucretius, Books I., II.	,, Ad Atticum, Books I., II.
Ovid—Fasti, Book I.	,, Actiones Verrinæ.
Persius.	Livy—Books IV. and XXII.
Terence—Andria.	Tacitus—The Annals, Books I. to IV.
Plautus—Capteivei.	Inclusive.

Composition in prose and verse.

For Senior Scholarships in Modern Languages, Literature, and History.

The French Language:
    Lavallée—Histoire des Français.
    Histoire de la Littérature Française, par Demogeot ou Nisard.

The German Language:
    Nationalliteratur, von A. F. Vilmar.
    Schiller's Maria Stuart.
    Goethe's Iphigenie.

The Italian Language:
    Tasso—La Gerusalemme Liberata—first five Canto.
    Dante's Inferno—Italian Literature, published by Messrs. Chambers.

    Translation from English into French, German, or Italian.

English:
    THE ENGLISH LANGUAGE.
      The History of the English Language.
    ENGLISH LITERATURE.
      The History of English Literature from 1789 to 1830, with a critical knowledge of—
        1. Wordsworth—Excursion.
        2. Coleridge—Collected Poems.
        3. Scott—Marmion.
        4. Byron—Childe Harold.
        5. Shelley—Adonais.
        6. Lamb—Essays of Elia.

History:
    The History of Europe from 1789 to 1830.

For the Senior Scholarship in Mathematics.

The subjects of previous Examinations (for which see page 35), with the following additions :—
    Analytical Geometry of Three Dimensions.
    Differential Equations.

For the Senior Scholarship in Natural Philosophy.

Duhamel—Mécanique.
Brinkley—Elements of Astronomy, including the Appendix.
Parkinson's Optics.
Everest's Translation of Deschanel's Natural Philosophy.

For the Senior Scholarship in Mental and Social Sciences.

The subjects discussed in the Lectures of the Professors, with the following additions :—

Metaphysics and Logic:
    Sir William Hamilton's Philosophical Essays and Notes on Reid.
    Mill—System of Logic, Book III. to the end of Volume I.

Political Economy:
    Principles of Political Economy, by John Stuart Mill.
    Senior's Political Economy.
    Goschen on Foreign Exchanges.
    R. H. Mills—Lectures on Currency and Banking—second edition.
    The value attached to the subjects will be in the following proportions, viz. :—

Metaphysics and Logic,	.	60
Political Economy,	.	40

For the Senior Scholarship in Chemistry.

Chemical Physics (in Miller's Chemistry).

Inorganic Chemistry:
  General principles of Chemical Philosophy. Modern views of Chemistry.
    Crystallography.
  Chemistry of the Metals. Constitution of Salts. Metallurgy.

Organic Chemistry:
  Ultimate analysis of Organic Bodies. Recent views of the constitution of
    Organic Bodies. Empirical and Rational formulæ. Determination of the
    density of Vapours. Law of Substitution. Homologous Series. Chemical
    Types. Preparation and Properties of the Alcohol Series and their Deriva-
    tives. Cyanogen, its Compounds and Derivatives. Organic Bases of Arti-
    ficial Origin.

Practical Chemistry:
  The Analysis of Mixtures, containing two or more Acids and Bases.

For the Senior Scholarship in Natural History.

The Lectures of the Professors.
Sachs—Text-book of Botany, Books I. and II.
Hooker, J. D.—The Students' Flora of the British Islands (The Characters
    of the Orders and Tribes).
Huxley, T.—Lessons in Elementary Physiology.
Mivart, St. J.—Lessons in Elementary Anatomy.
Rolleston—Forms of Animal Life.
Lyell—Students' Elements of Geology.

See Appendix A., No. I., p. 24, for the University Exhibitions and
Prizes in the Faculty of Arts.

No. III.—SCHOOL OF ENGINEERING.

DEGREE IN ENGINEERING.

The course of instruction prescribed in the School of Engineering is intended,
in the first place, to provide the preliminary scientific training required by the
young Engineer; next to give systematic teaching of those branches of practical
work, which can be taught in College, viz., Drawing, and the different kinds of
Surveying, Levelling, and Mensuration, and lastly, in the third year, together
with some illustrations of the practical application of the scientific principles
already taught, to give some general outline of the design of the more ordinary
work, with which the Engineer is concerned, so that when the Student goes from
the College into the office he may be prepared to be of use in doing the work
ordinarily expected from pupils of some standing, and also may be better able
to profit by the opportunities thus afforded to him of gaining a stock of prac-
tical knowledge, through his being able to give his undivided attention to them.

Although primarily intended for the education of the Civil Engineer, it will
be seen that the Course of Lectures is well adapted to give such a general scientific
education as is suitable for the young man intended for manufacturing or busi-
ness life, more especially if in the third year the more Engineering portion be
replaced by one or more other Courses having a more immediate bearing on the
work which the Student purposes to take in hand, as for instance Chemistry or
Natural History, &c.; and again, by a similar substitution, the Courses of
Lectures can be adapted to the want of those Students who propose to take up
a group of chiefly scientific subjects for some of the Competitive Examinations,
as for instance, by adding a Course of English Literature and History in the
second, or in both the first and second years.

To obtain the Degree in Civil Engineering, Students must matriculate in
Engineering, complete the prescribed course in one of the Queen's Colleges,
and pass the University Examinations. Of these there are two; the Preliminary
Examinations at the commencement of the third Session, and the Final
Examination in the following September.

Each Candidate for the Degree in Civil Engineering is required—

1. To have been admitted a Matriculated Student of the Queen's University in the Department of Civil Engineering.
2. To have studied in the Colleges of Queen's University the Course herein prescribed.
3. To have passed the University Examinations herein prescribed.

The Course for the Degree in Civil Engineering

shall usually extend over Three Sessions, and shall comprise attendance on the following Curriculum :—

FIRST SESSION.

Mathematics (First Course).
Chemistry.
Modern Languages.
Geometrical Drawing.
Office Work.
Mineralogy, Geology, and Physical Geography.

SECOND SESSION.

Mathematics (Second Course).
Experimental Physics.
Civil Engineering.
Office Work.
Field Work.

THIRD SESSION.

Natural Philosophy, applied.
Mathematical Physics.
Civil and Mechanical Engineering.
Office Work.
Field Work.
Engineering Excursions.

Attendance on these Courses shall in all cases be understood to include passing such Examinations as may be appointed by the College Council, as well as the catechetical parts of the Courses of its Lectures.

Engineering Students shall reside at their respective Colleges during at least the first two Terms of each Session, and can be exempted from residence during the third Term also, only by a special grace of the College Council.

The study of the Engineering Curriculum may be extended over more than three Sessions, on the recommendation of the College Council, and under such regulations as the Council shall impose. Some relaxation of the order in which the subjects shall be studied will also be admitted, on the recommendation of the Council.

Candidates will, on the special recommendation of the College Council, be admitted to the Degree after two years' residence instead of three, if their previous acquaintance with a sufficient group of the subjects above set down for study in the First and Second Session is deemed by the Council satisfactory. In such cases the Certificate of the Council will be accepted in lieu of attendances upon these Courses, but will not exempt Candidates from the University Examinations in them.

In order to obtain this Certificate, Students must have attended previously at least one Session in Arts, or one year in an Engineer's office. On making application to the Council, such Students will be allowed to present themselves, at the time of Matriculation, for examination in the subjects of any four of the eight Courses of Lectures of the first two years. On passing this Examination, they will be allowed to take rank at once as Students of the second year, and will then be required to attend those other four Courses of Lectures only, in the subjects of which they have not passed; but they will not be eligible for the Scholarship of that year.

Students in Arts, who have already passed Sessional Examinations in three of the Courses of the first two years, will not be required to pass this Examination, but may make application to the Council to be admitted at once as second year Students, as above. They will also be allowed, by permission of the Council, to postpone their attendance on one of the five Courses of Lectures to the third year, provided it be not one of the subjects required for the First University Examination; they will then not be eligible for Scholarship of the third year, if the Course so postponed be included in the Scholarship Course of the third year.

The application to be admitted to this Examination must be lodged with the Registrar before the first day of the Session, and must state what are the four subjects in which the Students propose to offer themselves for Examination, and must be accompanied by a Certificate of the required attendance of one or more years in Arts or an Engineer's Office.

On passing the Sessional Examinations in the subjects of these four Courses of Lectures which they shall have attended as Students of the second year, they will be promoted to the rank of Students of the third year; and, on completing the regular Course of that year, will be furnished with the Certificate required by the Senate of the University.

The University Examinations shall extend to all the subjects of the above Curriculum. French will, in all cases, be required.

Candidates must present themselves before the close of their Collegiate Course for Examination in the following subjects, viz.:—Mathematics (*First Course*); Experimental Physics; Modern Languages; Geometrical Drawing (including Orthographic Projection, Isometric Projection, Descriptive Geometry, and Linear Perspective); Mathematics (*Second Course*); Mensuration, Levelling, and Mapping.

The final Examination shall extend to all the subjects of the Engineering Course, in which the Candidate shall not have previously passed. English Composition will form a part of each University Examination.

This Ordinance shall take effect from the first day of January, 1860; Students who shall have entered the Engineering Schools of the Colleges of Queen's University previously, may proceed either under the present Ordinance, or under that hitherto in force.

LECTURES.

The Lectures in Engineering commenced on Monday, 23rd October, 1876.

The following Table shows the various Classes which are to be attended in each year, with the corresponding days and hours of Lecture, and the College and Class Fees payable by Engineering Students:—

CLASS.	Terms.	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.	Fees		
								£	s.	d.
1st Session										
Mathematics (1st Course)	1, 2, 3	12		12		12		2	0	0
Chemistry	1, 2, 3	11		11		11		2	0	0
Modern Languages	1, 2, 3	5		5		5		2	0	0
Geometrical Drawing	1, 2, 3	10				10		2	0	0
Office Work (10 A.M. to 5 P.M.)	1, 3, 5		10		10		10	0	0	0
Mineralogy, Geology, and Physical Geography	1, 2, 3		9		9			1	0	0
College Fee..								0	10	0
2nd Session										
Mathematics (2nd Course)	1, 2, 3	2		2		2		2	0	0
Experimental Physics, .	1, 2, 3	10		10		10		2	0	0
Civil Engineering, .	1, 2, 3		10		10		10	2	0	0
*Office Work (10 A.M. to 5 P.M.)	1, 3, 5		10		10		10	0	0	0
College Fee..								0	5	0
3rd Session										
Natural Philosophy, applied	1, 2, 3	2		2		2		2	0	0
Mathematical Physics, .	1, 2, 3	1		1		1		2	0	0
Civil and Mechanical Engineering, .	1, 2, 3	12		12		12		2	0	0
*Office Work (10 A.M. to 5 P.M.)	1, 3, 5		10		10		10	0	0	0
College Fee..								0	5	0

* For Students who have attended this Course in their first year, the Fee is £1.

OUTLINE OF THE COURSE OF LECTURES ON CIVIL ENGINEERING.

Professor, ALEXANDER JACK, M.A.

FIRST YEAR.

Monday, Wednesday, and Friday.
Subject of Lectures.—Orthographic Projection; Descriptive Geometry; Shadows; Isometric Projection; Perspective; Geometry of the Oblique Bridge; Principles of Architecture.

Text-books—Hall's Descriptive Geometry; Engineer and Machinist's Drawing Book; Rickman's Architecture; Buck on Oblique Bridges.

SECOND YEAR.

Tuesday, Thursday, and Saturday.

Subject of Lectures—Surveying and Levelling.

Text-books—Rankine's Civil Engineering; Cotton's Manual of Railway Engineering; Williams' Geodesy.

THIRD YEAR.

Monday, Wednesday, and Friday.

Materials used in Construction; Principles of Construction of Bridges, Roads, Railways, Canals; Hydraulic Engineering; Strength of Materials; Principles of the Construction of the different Machines employed by the Engineer.

DRAWING OFFICE.

Attended by all the Classes—Tuesday, Thursday, and Saturday.

The First Year's Class are chiefly employed in drawing the problems given at lectures, and a few easy examples of their applications. The Second and Third Years' Classes, in making working drawings of examples of the subjects of lectures, and in Mapping.

Practical Instruction in the Field in the use of Surveying Instruments is given during the Session.

For an outline of the other courses of lectures in the above table to be attended by Engineering Students, see Appendix No. II., p. 29, *et seq.*

SCHOLARSHIPS.

In the School of Engineering there are five Scholarships, two of which are appropriated to Students of the first year, two to those of the second, and one to those of the third. (See also p. 23.)

SUBJECTS OF EXAMINATION.

The Subjects of Examination for the Engineering Scholarships are as follows:—

Subjects of Examination for Engineering Scholarships of the First Year.

Arithmetic:

Mensuration of Rectilineal Figures and of the Circle:

Algebra:

The Solution of Simple and Quadratic Equations, with one or more unknown quantities. Easy questions in the application of Algebra to Geometry. Arithmetical and Geometrical Progressions. The Nature of Logarithms.

Euclid:

Books I., II., III., and IV., with Deductions.

Trigonometry:

Definition of the Sine, Tangent, &c., of an Angle. The easier analytical formulæ. The Solution of Plane Triangles with Demonstrations. Nature and use of the Tables.

Subjects of Examination for Engineering Scholarships of the Second Year.

Mathematics:

The same as for Science Scholarships in Arts of the Second Year, except that Spherical Trigonometry will be substituted for Analytical Geometry.

French:

Demogeot—Histoire de la Littérature Française.
Translation from English into French.

Chemistry:

Laws of Combination and Affinity. Preparation and Properties of the chief Organic Substances. Metallurgic Operations. Mortars and Cements.

Geometrical Drawing:

Descriptive Geometry. Orthographic Projection. Isometric Projection. Perspective Geometry of Oblique Bridge.

Subjects of Examination for Engineering Scholarships of the Third Year.

Mathematics—
Algebra—Theory of Equations and Methods of Approximation. Elimination. Summation of Series. Binomial and Exponential Theorems. Scales of Notation, &c.
Trigonometry—Plane and Spherical, with Astronomical applications.
Analytical Geometry, and Geometrical Conic Sections.
Differential Calculus—Involving demonstrations of the rules for differentiating Algebraic, Circular, and Exponential Functions, founded upon a clear statement of the nature of Limits and Definition of a Differential coefficient. Taylor's and Maclaurin's Theorems. Maxima and Minima. Criteria of the same, with proofs. Expansion of Tangent, Normal, Evolute, &c.
Integral Calculus, including more particularly Rational Fractions, Binomial Differentials, Areas of Curves, Rectification of Curves, Cubature of Solids of Revolution.

Natural Philosophy—
Newth's Mechanics.
Gantô—*Traité de Physique*—Books VI., VII., VIII., IX.

Geology and Mineralogy—

Civil Engineering—
Instruments used by the Civil Engineer. Their adjustments and use. Surveying. Levelling.

See Appendix No. I. p. 35, for the University Exhibitions in Engineering.

No. IV.—FACULTY OF LAW.

DEGREES.

Candidates for the Diploma of Elementary Law must have passed a Matriculation Examination, and pursued the following

Course of Study for the Diploma of Elementary Law.

FIRST SESSION.

Law of Real Property, Principles of Conveyancing; Jurisprudence.
The Course of the Professor of English Law for the First Year's Class comprise Elementary Instruction in the Law of Real Property, and in practical Conveyancing. The text-book read is "Williams on Real Property."

The following works are recommended for perusal:—
Blackstone's Commentaries, by Stephen, Vol. I., and Vol. II. of Kerr's edition of the same work.

SECOND SESSION.

Law of Personal Property, Equity, and Bankruptcy; Civil Law.
The Course of the Professor of English Law for the Second Year's Class comprises instruction in the Law of Personal Property, Equity, Bankruptcy, and the practice relating to those branches of Law. The text-books read are, "Smith on Contracts," "Williams on Personal Property," and "Smith's Principles of Equity."

The following are recommended for perusal:—
Blackstone's Commentaries, by Stephen, Vol. II. ; same, by Kerr, Vol. II. ; Smith's "Mercantile Law" ; Smith's "Manual of Equity" ; Story's "Equity Jurisprudence." Vol. I. ; Kisbey on the Bankruptcy Acts, 1857 and 1872 ; the Debtors Act, 1872.

THIRD SESSION.

Common and Criminal Law.
The Course of the Professor of English Law for the Third Year's Class comprises the History, Constitution, and Jurisdiction of the several Courts of Justice, and their Procedure. The text-books are the third and fourth volumes of Blackstone's Commentaries, editions by Stephen and Kerr.

The following works are recommended for perusal:—

Broom's "Common Law," Broom's "Legal Maxims," Smith's "Leading Cases," "Coringan's County Courts," by Johnstone, Common Law Procedure Acts, 1853 and 1856, &c., by Bewley and Nash; Woolrych's Criminal Law, or Russell on Crimes.

Candidates for the Degree of LL.B. will be admitted to Examination for that Degree from the Queen's University in Ireland, provided they shall have proceeded to the Degree of A.B., and shall have attended the Lectures and passed the Examinations prescribed for the Diploma of Elementary Law.

Students who have obtained the Degree of LL.B. will, at the expiration of two years after they have obtained the Degree, be admitted to the Examination for the Degree of LL.D. They are examined in the Laws of the Admiralty and in International Law, for which Examination the following Books are suggested :—

Lord Hale's Treatise, De Jure Maris.
Dr. FitzHenry Townsend's statement of the differences in Jurisdiction and Practice between the English and Irish Courts of Admiralty, annexed to the Report of the Royal Commission of Inquiry, 1866.
Boyd's Admiralty Practice.
Lord Tenterden on Merchant Ships (by Shee).
Wheaton's International Law.
"Historicus," Letters of, on International Law.
May's Constitutional History.

LECTURES.

The complete Course for each Class consists of Twenty-four Lectures, by the Professor of English Law, in each Collegiate Session of three years, and of Twenty-four Lectures by the Professor of Jurisprudence, in each course of the first two years. The Lectures are delivered after Michaelmas Law Term, in the month of December, and after Hilary Law Term, in the months of February and March. Five-sixths of the Lectures in each Course must be attended.

Students proceeding to the Irish Bar, if they be Graduates in Arts of the Queen's University, and have attended for one year the Lectures, and passed the Examinations of the Professors of Law in any of the Queen's Colleges, will under the rules made by the Benchers of the King's Inns in Trinity Term, 1876, be required to attend but for one year at the Lectures, and on two only of the Professors of the King's Inns.

Students proceeding to the Irish Bar, who are not Graduates in Arts of the Queen's University, but have for one year attended the Lectures of the Professors of Law in any of the Queen's Colleges, will be required to attend for two years at the Lectures of the Professors of the King's Inns.

Graduates, or Undergraduates, are exempted from the operation of the Benchers' rule requiring Law Students to pass an examination in the English Language and Literature, and in Latin Language.

With respect to Students for the English Bar, the Council of Legal Education may 'accept a Degree in Law granted by the Queen's University, as an equivalent for the Examination to be passed in any of the following subjects, viz. :—Roman Civil Law; the Law of Real and Personal Property; provided the Council is satisfied that the Student, before he obtained his Degree, passed a sufficient Examination in such subject or subjects.

Students preparing for the profession of Attorney or Solicitor in Ireland, can save two years of their apprenticeship by taking the Degree of B.A. or of LL.B. in the Queen's University.

Students intending to proceed, so as to entitle themselves to serve an apprenticeship of four years instead of five, under the Attorneys and Solicitors Act, Ireland, 1866, must enter their names with one of the Registrars of the Queen's University, Cork, Belfast, or Galway, and pay the necessary College and Class Fees to the Bursar before the commencement of the Law Lectures in each Session. Such Students need not pass the Matriculation Examination, but must attend the Lectures, and pass the College Examinations prescribed for the first and second years, of the course of study for Candidates for the Diploma in Elementary Law.

SCHOLARSHIPS.

Subjects of Examination.

FIRST YEAR.

Examination by the Professor of Jurisprudence:—
Reddie's Inquiries in the Science of Law.
Adam Smith's Wealth of Nations—Book III.
Hallam's Middle Ages—Chapters 2 and 8.

Examination by the Professor of English Law:—
Williams—Principles of the Law of Real Property.

SECOND YEAR.

By Professor of Jurisprudence.
The Lectures of the Professor in the First Year.
Ancient Law, by H. S. Maine.
The Chapters on Social Science in J. S. Mill's Logic—Book VI., Chap. 6, to end of the Book.
Austin's Jurisprudence, Vol. I, 3rd Edition.

By Professor of English Law.
The Lectures of the Professor for the preceding year.
Smith—Manual of Equity Jurisprudence.
Williams—Principles of the Law of Personal Property.
Smith—On Contracts.

THIRD YEAR.

By Professor of Jurisprudence.
Austin's Jurisprudence, Vol. 2, 3rd Edition.
Sandar's Justinian, and the Lectures of the Professor in the first and second years.

NOTE.—The following works, in addition to the text-books mentioned, should be referred to in connexion with the principal subjects discussed in the Lectures on Jurisprudence:—
Dumont's Bentham (translation by Hildreth), "Principles of Legislation," and 1st and 2nd parts of the "Principles of the Civil Code."
Stephens' "Criminal Law."
Spence's Equity Jurisprudence, Vol. I, Part 1.
Mackenzie's Roman Law.

By Professor of English Law.
The Lectures of the Professor for the preceding years.
Smith—Leading cases on branches of the Law.
Story—Equity Jurisprudence.

The Senior Law Scholarship will be awarded, by Examination, to the most distinguished Student who shall have proceeded in the Course of Arts to the Degree of A.B., and who shall have completed the Course of Legal Study prescribed to Candidates for the Degree of LL.B. in the Queen's University in Ireland.

Examination for the Senior Scholarship in Law.

The Lectures of the Professors and subjects appointed for Scholarship Examination in the preceding years.
Sugden—The Law of Vendors and Purchasers.
Furlong—Law of Landlord and Tenant.
Taylor—Treatise on the Law of Evidence.
Stephen—Treatise on the Principles of Pleading.
Smith—Commentaries, Books V., VI.
Hallam—Constitutional History.
Broom's Constitutional Law.
Spence's Equity Jurisprudence, Vol. I, Part 1.

No. V.—FACULTY OF MEDICINE.

DEGREES OF M.D. AND M.CH.

Students who wish to obtain the Degree of M.D., or of M.Ch. in the Queen's University, must be matriculated Students of one of the Queen's Colleges, and must pursue the courses of study prescribed by the Senate of the University.

Medical Students may matriculate either at the General Matriculation Examination (held in 1874, on the 20th of October), or at the Supplementary Examination held in the second or third week of *November*.

The following are the Regulations of the Senate concerning those Degrees:—
Each Candidate for the Degree of Doctor in Medicine or Master in Surgery is required—

1st.—To have passed in one of the Colleges of the Queen's University the Entrance Examination in Arts, and to have been admitted a Matriculated Student of the University.

2nd.—To have attended in one of the Queen's Colleges, Lectures on one Modern Continental Language for six months, and Lectures on Natural Philosophy for six months.

3rd.—To have also attended, in some one of the Queen's Colleges, at least two of the courses of Lectures marked with an asterisk. For the remainder of the courses, authenticated certificates will be received from the Professors or Lecturers in Universities, Colleges, or Schools, recognised by the Senate of the Queen's University in Ireland.

4th.—To pass three University Examinations—the First University Examination, the Second University Examination, and the Degree Examination.

The Curriculum shall extend over at least four years, and shall be divided into periods of at least two years each.

Candidates are recommended to pass the Matriculation Examination prior to entering on the second period.

It is recommended that the first period shall comprise attendance on the following Courses of Medical Lectures:—

* Chemistry.
* Botany, with Herborizations for practical study, and Zoology.
* Anatomy and Physiology.
* Practical Anatomy.
* Materia Medica and Pharmacy.

And that the second period shall comprise attendance on the following Courses of Medical Lectures:—

Anatomy and Physiology (Second Course).
Practical Anatomy (Second Course).
* Theory and Practice of Surgery.
* Midwifery.
* Theory and Practice of Medicine.
* Medical Jurisprudence.

In addition to the above Courses of Lectures, Candidates shall have attended during either the first or second period—

A Modern Continental Language (in one of the Colleges of the University).
Experimental Physics (in one of the Colleges of the University).

Also, during the first period—

Practical Chemistry (in a recognised Laboratory).
Medico-Chirurgical Hospital (recognised by the Senate) containing at least sixty beds, together with the Clinical Lectures therein delivered, at least Two each Week—a Winter Session of Six Months.

And during the second period—

Practical Midwifery, at a recognised Midwifery Hospital, with the Clinical Lectures therein delivered—for a period of Three Months, in an Hospital containing not less than Thirty beds; or Six Months, in an Hospital containing not less than Fifteen beds.
Medico-Chirurgical Hospital (recognised by the Senate) containing at least sixty beds, together with the Clinical Lectures therein delivered—Eighteen Months; including either three Winter Sessions of Six Months each, or two Winter Sessions of Six Months each, and two Summer Sessions of Three Months each.

The regulations under which degrees in Surgery will be conferred on Candidates who graduated in Medicine before the year 1865, may be learned on application to the Secretary of the Queen's University.

Medical Examinations are held in June, and in September and October.

The June Examinations are Pass Examinations, and commence on the Tuesday following the Second Saturday in June.

The Honor Examinations commence on the last Tuesday in September, and are followed by Pass Examinations.

Each Candidate for Examination in June must forward to the Secretary, on or before the first of June, notice of his intention to offer himself as a Candidate along with his Certificates; and each Candidate for Examination in September or October must forward similar notice, along with his certificates.

LECTURES.

The Lectures in this Faculty began on Thursday, the 2nd November, 1876.

The following Curriculum is recommended for all Medical Students; the days and hours of Lecture and the Fees are shown in the table:—

CLASS.	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.	Fees. (£ s. d.)	
1st Year Practical Anatomy,	12	12	12	12	12		2 0 0	
French,	1		1		1		1 0 0	
Natural Philosophy,		11		11		11	2 0 0	
Natural History,	3		3		3		1 0 0	
Chemistry,	11		11		11		2 0 0	
College Fee,							0 10 0	11 10 0
2nd Year Anatomy & Physiology,	1	1	1	1	1		3 0 0	
Practical Anatomy,	12	12	12	12	12		2 0 0	
Practical Chemistry,	2		2		2		3 0 0	
Materia Medica,	9		9		9		2 0 0	
College Fee,							0 5 0	11 5 0
3rd Year Practical Anatomy,	12	12	12	12	12		3 0 0	[Half Course]
Anatomy & Physiology,	1	1	1	1	1			
Midwifery,	4		4		4		3 0 0	
Surgery,	4		4		4		3 0 0	
College Fee,							0 5 0	9 5 0
4th Year Medical Jurisprudence,	2		2		2		3 0 0	
Medicine,	1	1	1	1	1		1 0 0	
College Fee,							0 5 0	4 5 0

The Course of PRACTICAL ANATOMY was conducted by the Professor of Anatomy and Physiology, assisted by Demonstrators.

The Anatomical Demonstrations

commenced on 2nd of November, and were continued daily at Twelve o'clock, except Saturdays.

NOTE.—All the Lectures are recognised by the Queen's University in Ireland, by the Universities of London, Glasgow, Aberdeen, and St. Andrew's; the Colleges of Surgeons of Dublin, Edinburgh, and London; by the Apothecaries' Companies; by the Army, Navy, and East India Medical Boards, &c. &c.

HOSPITAL ATTENDANCE.

Clinical Lectures on Medicine and Surgery are delivered at the North and South Infirmaries, by the Physicians and Surgeons of those Institutions.

	£ s. d.
Fee for twelve months,	8 8 0
Fee for six months,	5 5 0
Practical Pharmacy at the same Infirmaries :	3 3 0
Fee for three months.	

Clinical Midwifery at the Lying-in Hospital, with Practical Attendance upon Thirty Midwifery cases :

Fee for six months, . . . 3 3 0

Further information may be had from the Medical Officers at the Infirmaries.

OUTLINES OF THE COURSES OF LECTURES DELIVERED BY THE PROFESSORS
IN THE FACULTY OF MEDICINE.

Anatomy and Physiology.

Professor, J. J. CHARLES, M.A., M.D.

Anatomy and Physiology :

This Class meets on Mondays, Tuesdays, Wednesdays, Thursdays, and Fridays, at One o'clock, P.M., and occasionally on Saturdays, at Ten o'clock, A.M.

The Course comprises :

(1.) Histology—an account of the tissues of the body. (2.) The Anatomy and Physiology of the Organs of Digestion, Respiration, Circulation, Excretion, and Reproduction. (3.) The Anatomy and Physiology of the Lymphoid Organs, the Brain, Spinal Cord, Organs of Special Sense and Voice. (4.) Embryology, including a description of the development of the principal organs. The lectures are amply illustrated by diagrams, plates, models, moist and dry specimens from the Anatomical Museum, Microscopic preparations, recent dissections and experiments. As the subjects embraced in this course cover a very extensive field, a few of them are treated of only in alternate Sessions.

The SENIOR DIVISION of the class, in addition to attendance on the ordinary lectures, meets specially every Thursday, after the Christmas recess, for the consideration of the higher portions of the course. *Oral Examinations* are frequently held, usually on Wednesday or Saturday. There are also *Written Examinations* immediately after Christmas, as well as at the close of the Session.

TEXT-BOOKS—Quain's Anatomy and Kirke's Physiology. Senior Students are recommended to read in addition :—Carpenter's Human Physiology; Hermann's Physiology; Frey's Histology; Stricker's Histology.

Histology and Practical Physiology :

Instruction in this department will be given next Session in the *Physiological Laboratory*, which has been lately provided with microscopes, and the apparatus necessary for performing experiments on Circulation, Respiration, Inervation, &c.

TEXT-BOOKS—Frey's Practical Physiology; Schäfer's or Rutherford's Histology. And for Senior Students—Handbook for Physiological Laboratory, by Dr. Burdon Sanderson, Klein, &c.

Practical Anatomy :

The *Anatomical Demonstrations* are given on five days in the week by the Senior Demonstrator, and occasionally by the Professor of Anatomy.

The Course includes :

(1.) The Descriptive Anatomy of the Bones and Ligaments. (2.) The Topographical Anatomy of the Limbs, Head, and Neck, and of the Thoracic and Abdominal cavities, with the exception of the Viscera.

Three *Prosectors* are appointed annually from amongst the more deserving students.

SENIOR DIVISION OF THE CLASS.

The Professor of Anatomy has a special meeting of the senior division of the class every Tuesday, when the more abstruse subjects of the course are discussed.

JUNIOR DIVISION OF THE CLASS.

The Junior Demonstrator meets the junior students every Wednesday after Christmas at Ten o'clock, A.M., for special instruction in Osteology.

The DISSECTING ROOM is open from Nine o'clock, A.M., till Four o'clock, P.M., daily, and the directions of the students are superintended by the Professor, Demonstrators, and Prosectors of Anatomy.

The Lectures and Demonstrations are illustrated by recent dissections, diagrams, plates, and osteological specimens.

TEXT-BOOKS—Ellis's Demonstrations and Quain's Anatomy. For consultation :—Holden or Wagstaffe's Osteology; Gray's Anatomy; Holden's Medical and Surgical Landmarks; Cruveilhier's Anatomy.

Theory and Practice of Medicine.

Professor, D. C. O'CONNOR, B.A., M.D.

This class meets on Mondays and Wednesdays, at one o'clock, P.M., and on Saturdays at twelve, noon.

The subjects of the Course are treated of in the following order :—

Fevers—Intermittent, Remittent, Typhus, Typhoid, Relapsing. *Exanthemmatous Diseases*—Scarlatina, Rubeola, Variola, Varioloid, Varicella, Vaccination. Diphtheria, Cholera, Purpura, Scorbutus, Erysipelas, Rheumatism. *Cerebral Diseases*—General complications, causes—remote and proximate, Meningitis, acute and chronic Hydrocephalus, Cerebritis, —Ramollinsem,* Apoplexy. *Spinal Diseases* in the same order. Paralysis—general and partial. *Diseases of Sensibility*—Hyperæsthesia and Anæsthesia. *Diseases of Motility*—Hysteria, Chorea. *Diseases of the Respiratory Organs*—Laryngitis, Croup, Bronchitis, Pneumonia, Pleuritis, General Observations on Tubercle and Scrofula, Tuberculæ and other forms of Phthisis. *Diseases of the Heart, &c.*—Pericarditis, Endocarditis, Valvular Disease, general, Aneurism. *Diseases of the Alimentary Canal*—Dyspepsia, Gastritis, acute and chronic, Ulceration of the Stomach, Cancer, with general observations on Cancer. *Sporadic Cholera*, Fistæ, Dysentery, Diarrhæa, Tabes Mesenterica, Vermes. *Diseases of the Liver*—Icterus, Hepatitis, acute and chronic; Cirrhosis, Fatty and Waxy Liver. *Diseases of the Kidneys, &c.*—Diabetes, acute and chronic; Nephritis, Bright's Disease.

Theory and Practice of Surgery.

Professor, W. K. TANNER, M.D., F. & L.R.C.S.I.

This Course comprises :

The Principles and Practice of Surgery, also a special course of Operative Surgery, which will be demonstrated on the Subject.

During the Session will be discussed :—

I.—Elementary Diseases, under which are classed, constitutional affections, such as Fevers, Cachectic Diseases, and those of the nervous system; Inflammatory Action and Congestion. The healing process; Suppurations, Ulcers, Mortification, Hypertrophy, Atrophy, and Absorption, Tumours and Hæmorrhage.

II.—Morbid Action in certain Tissues, under which are classed—Affections of the Integument of Serous and Mucous Membranes, of Periosteum and Bone, of Joints, Arteries, Veins, Lymphatics, and Nerves.

III.—Injuries, under which heading are comprised—Wounds, Effects of Heat and Cold, Fractures, Dislocations, Sprains, and Ruptures of Muscles and Tendons, Bruises, and Suspended Animation.

The treatment of the above will be fully described, and the lectures illustrated by plates, diagrams, pathological and microscopical specimens, together with the instruments and surgical appliances employed.

TEXT-BOOKS recommended—Holmes' Principles and Practice of Surgery—Bryant's Practice of Surgery—Science and Art of Surgery (Erichsen).

Midwifery.

Professor, JOSHUA R. HARVEY, B.A., M.D.

This class meets on Mondays, Wednesdays, and Fridays, at four o'clock, P.M.

The Course includes :

I.—Introductory Sketch of the function of reproduction in animals.
II.—The anatomy, physiology, and morphology of the generative organs.
III.—Impregnation, and its results. —The development and growth of the Embryo.
IV.—Pregnancy, its phenomena, signs, variations, and diseases; sterility, impotence.
V.—The Pelvis, its relations, deviations, and deformities.
VI.—Labour, its causes, classification, &c. ; the physiology, mechanism, phenomena, and management of Labour, natural, unnatural, and complex, including abortion, Post-partum condition, natural and morbid.
Management of Infants.

Materia Medica.

Professor, MATTHIAS O'KEEFFE, M.A., M.D.

This class meets on Tuesdays and Thursdays at three o'clock, P.M., and on Saturdays at twelve o'clock. An Examination is also held on Saturday.

The Course, which extends over six months, and about sixty-four lectures, includes:

An introductory address, classification of medicines, based on the physiological action, verified or corrected by the result of clinical experience; a description of the physical and chemical characters of the drugs enumerated in the British Pharmacopæia, and of their most important class of recognised therapeutic value; an examination of the purity of the specimens supplied to the College Museum, by the application of the tests recommended by the British Pharmacopæia, and of other tests; exhibition to the class of specimens of the various drugs and medicinal preparations, dried and fresh medicinal plants, and coloured plates; physiological action of the more important remedies, with occasional experiments on animals to illustrate this action. Therapeutic uses of drugs, special attention being given to doses and modes of administration, the latter being illustrated by the writing of prescriptions on the black board; the medical and surgical uses of the various forms of electricity, illustrated by a full set of apparatus; practical exercise of the class on the medical plants growing in the Botanic Garden. The course terminates with an Honor Examination, at which prizes are awarded.

TEXT-BOOK.—The only text-book adopted is the British Pharmacopæia. In the therapeutic department of the Library there is a choice selection of works to which students are referred.

Medical Jurisprudence.

MEDICAL PART.

Lecturer, MATTHIAS O'KEEFFE, M.A., M.D., Professor of Materia Medica.

The lectures on this subject are given on Mondays, Wednesdays, and Saturdays, at three o'clock, P.M.

The Course opens with an introductory lecture, and the subjects are treated under the following heads:

Signs of Death.—Examination of the dead body, *rigor mortis*, the various conditions which modify it, its medico-legal application, putrefaction, forms and progress of putrescence; various kinds of violent death—hanging, drowning, injuries, &c.; their signs; as they accidental, homicidal, or suicidal? Examination of bloodstains (in which the class is practically exercised), of hair, &c. *Disputed Sexual Relations.*—Impotency, pregnancy, infanticide, abortion, &c. *Disputed results of bodily injuries. Disputed Mental Aberration.* Toxicology, including classification of poisons; the more important poisons are given to animals (chloroform being used where the least pain is inflicted, as with the irritants and corrosives), and the *post-mortem* appearances produced exhibited; tests for the various poisons shown, and the poison extracted from the viscera, or other organic matter by the lecturer, assisted by as many of the class as wish to work practically at the subject, in the special Laboratory for Materia Medica and Medical Jurisprudence. The course concludes with an Honor Examination, at which prizes are awarded.

LEGAL PART.

Lecturer, MARK S. O'SHAUGHNESSY, Professor of English Law.

The part of the Course, delivered by the Professor of English Law, consists of twelve Lectures, in which are treated:—

I.—Subjects relating to Forensic Medicine considered as—1. Questions affecting the civil right or social duties of individuals. 2. Injuries to property. 3. Injuries to person; and the state of the law in respect to subjects coming under these heads, including the practice in lunatic matters, life assurance, criminal responsibility, &c., is explained.

II.—In relation to Medical Police, the subjects treated of are considered as regards—1. Questions affecting the preservation of individuals. 2. Which relate to those collected into communities. Under this head the statutes relating to Public Health in Ireland are explained.

The law relating to the subjects treated of is illustrated by references to cases in which matter appropriate to the subject under consideration can be pointed out and their applicability explained, and points requiring the particular attention of medical men are suggested.

SCHOLARSHIPS.

There are Eight Scholarships in the Faculty of Medicine, which are thus allotted : —

    To the First Year—Two—One for Literature and one for Science.
       ,,   Second do. Two.
       ,,   Third do. Two.
       ,,   Fourth do. Two.

SUBJECTS OF EXAMINATION.

Scholarships of First Year.

1. LITERARY SCHOLARSHIP.

The Greek Language :
    Homer—Iliad, Books I., II., III., IV., V., and VI., inclusive.
    Euripides—Hecuba.
    Xenophon—The Anabasis, Books I., II., III.
    Greek Prose—Translation of short sentences from English into Greek.

The Latin Language :
    Virgil—First Six Books of the Æneid, the Georgics.
    Horace—First Two Books of the Odes, the Satires, and the Epistles, Books
      I., II.
    Cicero—De Senectute ; De Amicitiâ.
    Sallust—Conspiracy of Catiline and Jugurthine War.
    Cæsar—The Gallic War, Books V., VI.
    Latin Prose—Re-translations from English into Latin of portions of Cicero.
    N.B.—The Examination in Greek and Latin will be conducted partly *vivâ voce*,
      and partly by printed questions.

The English Language :
    Original Essays on subjects proposed by the Examiner.
    The Principles of English Grammar. (Bain recommended.)

History and Geography :
    Grecian History, to the Death of Alexander the Great. (Smith recommended.)
    Roman History, to the Accession of Augustus. (Liddell recommended.)
    Outlines of Ancient and Modern Geography.

2. SCIENCE SCHOLARSHIP.

Arithmetic :
    Measurement of Rectilineal Figures and of the Circle :

Algebra :
    The Solution of Simple and Quadratic Equations, with one or more unknown
      quantities. Arithmetical and Geometrical Progressions. The Nature of
      Logarithms. Easy questions in the application of Algebra to Geometry.

Geometry :
    Euclid—Books I., II., III., and IV., with Deductions.

Trigonometry :
    Definitions of the Sine, Tangent, &c., of an Angle. The easier analytical
      formulæ. The Solution of Plane Triangles, with Demonstrations. Nature
      and use of Logarithms.

Scholarships of the Second Year.

The French Language.
General Physics.
Chemistry.
Zoology and Botany.
Anatomy and Physiology.

Scholarships of the Third Year.

Practical Chemistry.
Anatomy and Physiology (the whole of the lectures of the previous Session,
    except those on the Brain and Spinal Cord).
Practical Anatomy.
Materia Medica.

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Appendix A.

No. V.
Faculty of
Medicine.

Scholarships of the Fourth Year.

I. One in Anatomy and Physiology; Practical Anatomy; and Surgery.
II. One in Practice of Medicine; Midwifery; and Medical Jurisprudence.

N.B.—At all examinations (both class and scholarship) on Anatomy and Physiology, Microscopic Specimens and Preparations from the Anatomical Museum will be exhibited.

See Appendix No. I., p. 25, for the University Exhibition and Prizes in the Faculty of Medicine.

APPENDIX B.

Appendix B.
List of
Successful
Candidates
for Degrees,
&c.

No. VI.—UNIVERSITY DEGREES, DIPLOMAS, AND HONORS obtained by Students of Queen's College, Cork, at the Commencements in June and October, 1876.

FACULTY OF ARTS.

Degree of M.A.

Thomas M Corker, B.A.,	.	.	First Class in Biological Science.
Annesley Ashworth Somerville, B.A.,			First Class in Mathematical Science.

Degree of B.A.

Samuel Lombard Brown,	.	.	First Class in Metaphysics, History, and Political Economy.
Michael Keating,	.	.	First Class in Logic, Metaphysics, and Political Economy.
Hamilton Benion,	.	.	Second Class in Biological Science.
Edwin Sandys Donovan,	.	.	Upper Pass Division.
Thomas Dorman,	.	.	Upper Pass Division.
William Kelly (and Galway),	.	.	Upper Pass Division.
John Philip Sullivan,	.	.	Upper Pass Division.

Passed.

Robert Ambrose.	Thomas Farrington.
William Barry.	Samuel Townsend.

First University Examination in Arts.

Passed.

Clarke H. Irwin.	James John Riordan.
John Ed. Laffan.	Samuel Townsend (Supplem. Jan. 1876.)

FACULTY OF LAW.

Degree of LL.B.

William C. Taylor, M.A.,	.	.	Second Class.
Denis F. Hannigan, B.A.,	.	.	Upper Pass Division.

FACULTY OF MEDICINE.

Degree of M.D.

John Jagoe Welply,	.	.	First Honor Class.
Jeremiah Mullane,	.	.	Second Honor Class.
George Lewis Latour,	.	.	Upper Pass Division.

Passed.

Charles Henry Bennett.	Charles Good.
Richard John Burke.	John Baldwin Isaac.
William Coatze (and Galway).	George Laffan.
Michael Collins.	Michael J. M'Carthy.
Jephson J. Connell.	John Mahony.
Arthur Dorman.	Francis H. S. Murphy.
John S. Dillon.	Maurice Joseph O'Sullivan.
Justin F. Donovan.	Thomas Francis Morhan.
Michael Dundon.	Charles K. Deane Tanner, B.A.
Robert Eccles, M.A. (and Belfast).	William Cotter Williamson.

DEGREE OF MASTER IN SURGERY (M.CH.)

Richard John Burke.
Ch. Henry Bennett.
William Cotton (and Galway).
Jephson J. Connell.
John S. Dillon.
Justin F. Donovan.
Michael Dundon.
Robert Eccles, M.A. (and Belfast).
Charles Good.

George Laffan.
George Lewis Latour.
Michael J. M'Carthy.
Francis H. S. Murphy.
Maurice Joseph O'Sullivan.
Thomas F. Riordan.
Charles K. Deane Tanner, B.A.
John Jagoe Welply.
William Cotter Williamson.

DIPLOMA IN MIDWIFERY.

Richard John Burke.
William Coates (and Galway).
Jephson J. Connell.
Arthur Derham.
John S. Dillon.
Justin F. Donovan.

Charles Good.
Jeremiah Mullane.
Francis H. S. Murphy.
Thomas F. Riordan.
John Jagoe Welply.

SECOND UNIVERSITY EXAMINATION IN MEDICINE.

Charles Yelverton Pearson, ... First Honor Class.
Robert Evans Hadden, ... Second Honor Class.

Passed.

John Leonard Aherne, B.A.
T. Gelston Atkins, B.A.
Alfred C. Bennett.
Joseph Crowley.
James Palmer Hanrahan.

James F. B. Holland.
Samuel George Levis.
Thomas Shipsey.
John P. Tuohy.

FIRST UNIVERSITY EXAMINATION IN MEDICINE.

John Jeffrys Dinzlo, ... Upper Pass Division.
Richard John Legge, ... Upper Pass Division.
Patrick Mullane, ... Upper Pass Division.

Passed.

Henry Kingston Allport.
James M'Mullan Bolster.
Hugh Brosnan.
Jeremiah Cotter.
William R. A. Cummins.
Richard Condon Daly.
Pierce Joseph Daly.
George W. Daunt.
Thomas Dorman, B.A.
Denham Francis Franklin.
Archibald Fraser.
James Geraghty.
Daniel J. Griffin.

Daniel Haly.
Stanley Harrington.
Edward Horan, B.A.
John Horsford.
Thomas M'Carthy.
Cornelius M'Sweeny.
Myles William O'Reilly.
Arthur H. Pallin.
Denis Quinlan.
Robert L. Rutherford.
John Tobb Thomas.
David Leopold Williams.

FIRST AND SECOND UNIVERSITY EXAMINATION IN MEDICINE.

Passed.

Daniel F. Barry.
John J. Hartnett.

Charles Smyth.

SCHOOL OF CIVIL ENGINEERING.

DEGREE OF BACHELOR OF ENGINEERING (B.E.)

Passed.

Richard Gifford Campion. | Michael J. M'Mullen.

FIRST UNIVERSITY EXAMINATION IN ENGINEERING.

Robert Scott Day, ... Upper Pass Division.

Passed.

Stephen John Hennessy.
Alexander E. Hull.

Michael J. M'Mullen (Supplem. Jan. 1876).
William H. K. Sandiford.

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University Prizes at Entrance:

GEOMETRY, ...	James Musgrave, ...	First.
	Thomas Brown, ...	Second.
ENGLISH COMPOSITION . .	George W. Weir	

No. VII.—SCHOLARS AND EXHIBITIONERS FOR THE SESSION 1876–77.

FACULTY OF ARTS.

Senior Scholars and Exhibitioners.

IN LANGUAGE, LITERATURE, AND HISTORY OF ⎱ John Ryan, B.A.
ANCIENT GREECE AND ROME, ⎰

MODERN LANGUAGES, LITERATURE, AND HIS- ⎱ Joseph J. Healy, B.A.
TORY, ⎰

Exhibitioner—Thomas Farrington, B.A.
      S. Leonhard Brown, B.A.

MENTAL AND SOCIAL SCIENCE, ⎱
Exhibitioner—Michael Keating, B.A.

MATHEMATICS, ... Robert T. Belcher, B.A.

NATURAL PHILOSOPHY, . . . Thomas M. Corker, M.A.

CHEMISTRY, ... John Philip Sullivan, B.A.
Exhibitioner—William Kelly, B.A.

Third Year's Scholars.

IN LITERATURE.	IN SCIENCE.
Clarke H. Irwin.	John E. Laffan.
James J. Riordan.	

Second Year's Scholars.

David Gamble Lockhart.	John P. Dalton.
	Matthew Steen.
	Robert J. Sullivan.
	George A. Rountree.
	Edward Gibbings.

First Year's Scholars.

Henry C. Baker.	Henry C. Baker.
George W. Weir.	Amanda A. O'Connell.
James Boyd Morrow.	Telford Smith.
Stanley Harrington.	Thomas Brown.
Richard L. Waugh.	Michael J. M'Henry.

Exhibitioners in Science.

James Musgrave.	John Morgan.
John M. M'Namara.	Michael Crowley.

SCHOOL OF ENGINEERING.

First Year's Scholars.

W. E. Burchill.	E. Dixon.

Third Year's Scholar.
R. S. Day.

FACULTY OF LAW.

Senior Scholar.
William C. Taylor, B.A.

First Year's Scholar.
William A. Corker.

Exhibitioner.
P. J. M'Carthy.

FACULTY OF MEDICINE.

First Year.

Patrick Nealon.	R. Hyde.

Second Year.

Joseph M. Roche.	Richard C. Daly.

Exhibitioner.

Patrick Mullane.

Third Year.

Charles Y. Pearson.	Robert E. Hadden.

Exhibitioner.

Joseph E. Crowley.

Fourth Year.

T. P. Hanrahan.	John E. Walshe.

Exhibitioners in Practical Medicine, Surgery, and Midwifery.

Practical Medicine,	. .	John O'G. Sandiford.
,, Surgery,	. .	Daniel F. Barry.
,, Midwifery,	. .	{John O'G. Sandiford,} equal.
		{John E. Walshe,}

PRIZE IN ANCIENT HISTORY.

Special Prize offered for the encouragement of the Study of Ancient History, . . . } John Ryan, B.A.

No. VIII.—SESSIONAL EXAMINATIONS.

PRIZES AND CERTIFICATES AWARDED FOR THE SESSION 1876-7.

List of the
Students
who ob-
tained
Honors or
Prizes at
the Ses-
sional Ex-
aminations.

FACULTY OF ARTS.

Third Year.

ENGLISH LITERATURE,	.	1. Clarke H. Irwin.	Prize.
		2. John E. Laffan.	Certificate.
		3. W. A. Fogerty.	,,
HISTORY,	.	1. Clarke H. Irwin.	Prize.
		2. John E. Laffan.	Certificate.
		3. W. A. Fogerty.	,,
CHEMISTRY,	.	1. James J. Morton,*	Prize.
MINERALOGY AND GEOLOGY,	.	1. John E. Laffan,†	,,

Second Year.

GREEK,	.	1. James B. Morrow,	Prize.
		2. George W. Welr,	,,
		3. D. G. Lockhart.	,,
LATIN,	.	1. Geo. W. Welr.	Prize.
		{D. G. Lockhart.}	,,
		{James B. Morrogh,}	,,
FRENCH,	.	Henry Anderson,	,,
LOGIC,	.	1. John P. Dalton.	,,
		2. Matthew Steen.	,,
MATHEMATICS,	.	1. J. P. Dalton.	Certificate.
		2. Matthew Steen.	,,
		3. R. J. Sullivan,	,,
		4. George A. Rountree.	,,
NATURAL PHILOSOPHY,	.	1. J. P. Dalton.	Prize.

* First in Chemistry Class.　　　　† First in Mineralogy and Geology Class.

First Year.

GREEK,	.	1. Thomas Brown,	Prize.
		2. Jeremiah Ambrose O'Connell,	,,
LATIN,	.	1. Jeremiah Ambrose O'Connell,	,,
		{ Michael J. M'Enery, } equal,	,,
		{ John M. M'Namara, } equal,	,,
		{ Thomas Brown	
		4. James Musgrave, } equal,	Certificates.
		{ Robert Thompson, }	
		7. Telford Smith,	Certificate.
		Michael Crowley,	,,
		9. James F. M'Mullen,	
ENGLISH LANGUAGE,	.	1. James B. Morrow,	Prize.
		2. James G. Coghlorne,	,,
		{ Thomas Brown, }	
		3. { Michael J. M'Enery, } equal,	Prizes.
		{ Jeremiah Ambrose O'Connell, }	
		6. Henry C. Baker,	Certificate.
MATHEMATICS,	.	1. { Michael J. M'Enery, } equal,	Prizes.
		{ Jeremiah Ambrose O'Connell, }	
		3. Henry C. Baker,	Prize.
		4. Telford Smith,	,,
FRENCH (Senior),	.	1. James Boyd Morrow,	Prize.
		2. George W. Weir,	,,
		{ Michael J. M'Enery, } equal,	{ Certi-
		{ Jeremiah Ambrose O'Connell, }	{ ficates.
,, (Junior),	.	1. John M. M'Namara,	Prize.
		2. James G. Coghlorne,	,,

SCHOOL OF ENGINEERING.

MATHEMATICS,	.	1. William E. Burchill,	Prize.
		2. E. K. Dixon,	Certificate.
CHEMISTRY,	.	1. E. K. Dixon,*	Prize.
MINERALOGY AND GEOLOGY,	.	{ E. K. Dixon, } equal,*	,,
		{ Hugh Tooker, }	
NATURAL PHILOSOPHY,	.	1. R. S. Day,	,,
GEOMETRICAL DRAWING,	.	1. William E. Burchill,	,,
		2. E. K. Dixon,	,,
OFFICE WORK,	.	1. Stephen J. Hennessy,	,,

FACULTY OF LAW.

JURISPRUDENCE,	.	1. { William H. Corker, } equal,	Prizes.
		{ Patrick J. M'Carthy, }	
ENGLISH LAW,	.	1. { William H. Corker, } equal,	,,
		{ Patrick J. M'Carthy, }	

FACULTY OF MEDICINE.

FRENCH,	.	1. Albert E. Scully,†	Prize.
		Henry Sinclair (non-matriculated)	{ Certificate
			{ of Honour.
NATURAL PHILOSOPHY,	.	1. { William B. Cole, } equal,	Prizes.
		{ Patrick Neslon, }	
PRACTICAL CHEMISTRY,	.	1. William D. Sexton,	Prize.
		{ John Hosford, } equal,	Prizes.
		{ Joseph Roche, }	

* Second in the whole class.
† Bracketed with James B. Morrow (Faculty of Arts) in Senior Class of First Year.

Appendix B.

	Second Year.	
ANATOMY AND PHYSIOLOGY,	1. John B. Lane,	Prize.
	{Joseph Roche, } equal,	
	1. {William D. Sexton,} equal,	
	4. Myles W. O'Reilly,	Certificate.
	5. Jeremiah Cotter,	

List of the Students who obtained Certificates or Prizes at the Sessional Examinations.

	Third Year.	
	1. Charles Y. Pearson,	Prize.
	2. Robert E. Hadden,	,,
PRACTICAL ANATOMY,	**First Year.**	
	1. Albert E. Scully,	Prize.
	2. Patrick Reslon,	,,
	3. Michael H. Feany,	,,
	John Moran,	Certificate of Honor.
	Second Year.	
	1. Jeremiah Cotter,	Prize.
	2. William A. Cummins,	,,
	3. John Hosford,	,,
	4. Patrick Mullane,	Certificate.
	5. Joseph Roche,	,,
	Third Year.	
	1. Charles Y. Pearson,	Prize.
	2. Joseph Crowley,	,,
	3. Robert E. Hadden,	,,
	Fourth Year.	
	H. Magner,	Certificate of Honor.
MATERIA MEDICA,	1. Jeremiah Cotter,	Prize.
	2. Richard C. Daly,	,,
	3. Edward Horan, M.A.,	Certificate.
	4. Joseph Roche,	,,
	5. William E. A. Cummins,	,,
SURGERY,	1. John P. Sullivan, B.A.,	Prize.
	2. Robert E. Hadden,	,,
	3. Alfred C. Bennett,	,,
MEDICINE,	1. Charles Y. Pearson,	Prize.
	2. John E. Walsh,	,,
	3. Daniel P. Barry,	,,
	3. {John O'G. Sandiford,} equal,	Certificates.
	{James P. Hanrahan, } equal,	
MIDWIFERY,	1. Robert E. Hadden,	Prize.
	2. Joseph Crowley,	,,
	3. Charles Y. Pearson,	,,
	{Daniel F. Barry, }	
MEDICAL JURISPRUDENCE,	1. {John O'G. Sandiford,} equal,	Prizes.
	{John E. Walsh, }	
	2. James P. Hanrahan,	Certificate.
	3. John E. Tuohy,	,,
PROSECTORS IN PRACTICAL ANATOMY DURING THE SESSION,	1. Daniel F. Barry,	
	2. Robert E. Hadden,	
	3. Daniel Lehane.	

No. IX.—EARLY ENGLISH TEXT SOCIETY'S PRIZES; AND NEW SHAKSPERE SOCIETY'S PRIZES.

EARLY ENGLISH TEXT SOCIETY'S PRIZES,	{Michael J. M'Enery, } equal,	First Prize.
	{James G. Copthorne,} equal,	
	Jeremiah Ambrose O'Connell,	Second Prize.
NEW SHAKSPERE SOCIETY'S PRIZES,	{Robert J. Sullivan,} equal,	
	{Thomas Brown, } equal,	

Appendix B.

Subjects
Lectured
on, &c.

No. X.

TABLE CONTAINING THE NAMES OF THE SEVERAL SUBJECTS LECTURED UPON DURING THE SESSION 1876–77, THE NUMBER OF LECTURES GIVEN ON EACH SUBJECT, AND THE TOTAL NUMBER OF STUDENTS ATTENDING THE CLASSES IN EACH SUBJECT.

	No. of Lectures on each Subject.	Total No. of Students attending the Classes in each Subject.
Greek, ...	173	24
Latin, ...	164	31
English Language, . . .	98	26
„ Literature, . .	93	6
History, ...	67	7
French, ...	310	13
Logic, ...	30	13
Metaphysics, ...	54	1
Political Economy, . . .	32	3
Mathematics, ...	154*	43
Natural Philosophy, . . .	225	56
Chemistry, Theoretical, . .	76	48
„ Practical, .	43†	52
Geology and Mineralogy, . .	60	9
Natural History, . . .	72	38
English Law, ...	48	3
Jurisprudence, ...	24	2
Anatomy and Physiology, . .	119	58
„ Practical, .	114	127
Medicine, ...	59	34
Midwifery, ...	57	27
Surgery, ...	67	34
Medical Jurisprudence, . .	36	33
Materia Medica, . . .	64	35
Engineering, ...	300	20

Appendix C.

Reports
of the
Professors.

APPENDIX C.

No. XI.

REPORTS OF PROFESSORS FOR THE SESSION, 1876–1877.

FORM OF CIRCULAR SENT TO EACH PROFESSOR.

RETURN to be filled up by the Professor of   , and to be returned to the Registrar, so filled up, for the official information of the President, on or before the   , being for the Collegiate Session

A.—As to the Course or Courses of Lectures given by the Professor. 1st. Duration and extent of the Course; number of Terms. 2nd. Number of weeks of Lectures in each Term. 3rd. Number of Lectures weekly, and days and hours of Lectures.

B.—The description or title of the Course or Courses of Lectures delivered, and a general abstract of the subjects of instruction contained in the Course, and the title of the Text-books recommended.

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* In consequence of the subdivision of the First Year's Class on certain days the number of lectures actually given to this class was about 123, although appearing only 74 on the roll, so that the total was in reality 154 and not 148. Many hours, besides, were devoted to missa't instruction, which do not appear on the roll.

† At this class had to be divided owing to want of accommodation in the laboratory, the number of lectures actually delivered was double the number appearing on the roll, namely, 94.

C.—Whether the Lectures are illustrated by reference to maps, diagrams, specimens, or experiments; and a general notice of the kind of illustrations used.

Appendix C. Reports of the Professors.

D.—Whether any method of Tutorial, or other special instruction, is employed, as by setting out portions of Text-books for lessons, by themes, or exercises in composition, or problems; and whether Special Class Examinations are held, and at what time; or whether Herborization Excursions, or Field Exercises, are given.

E.—What faculties or divisions of Students are those attending Courses of Lectures of the Professors making the return.

F.—The number of students attending each Course—distinguishing Matriculated and Non-Matriculated Students; and the general regularity of attendance.

G.—The general conduct of Students at the Professor's Lectures, and the general state of discipline as regards the Professor's Classes.

H.—The general condition of the department of which the Professor has charge, as to supplies, fitments, cleanliness, and accommodation, for the purpose of instruction.

The Professor, in making the above returns, is requested to mark the answers with the letter designating the portion of the form of return, as above, to which each answer refers.

Signed, by order of the President,

ALEXANDER JACK, *Registrar.*

FACULTY OF ARTS.

REPORT OF THE PROFESSOR OF GREEK.

A.—1. Three terms.

2. First term contained between seven and eight weeks; second term between nine and ten weeks; third term between five and six weeks.

3. Junior class, four lectures weekly; senior class, four lectures weekly; extra and third year's class, two lectures weekly.

B.—The course of Greek Language and Literature. Junior class: Anabasis of Xenophon, Book IV.; Hippolytus of Euripides, 1–1000; Curtius' Greek Grammar. Senior class: Odyssey, Books I. to VI. (inclusive); Euripides' Hippolytus; Demosthenes in Midiam; Curtius' Greek Grammar. Third year's class: Agamemnon of Æschylus.

C.—The lectures were occasionally illustrated by reference to maps and diagrams.

D.—The students prepared a portion of the text-book for each lecture. They also wrote exercises in prose composition.

E.—Arts.

F.—Thirty-eight matriculated; one non-matriculated. Regularity of attendance fair.

G.—Very good.

H.—The lecture-room would be much better adapted for the instruction of large classes were it arranged as a theatre, instead of having all the benches placed upon the same level.

VAUGHAN BOULGER.

REPORT OF THE PROFESSOR OF LATIN.

A.—The course extended through three terms. First term, eight weeks; second term, nine weeks; third term, six weeks. Junior class, four lectures weekly; senior class, three lectures weekly.

B.—The Latin Language. Junior class: Horace, Epistles, Book I., 11–20 ; Cicero, Tusculan Disputations, part of Book II. Senior class: Cicero, Tusculan Disputations, part of Book III. ; Terence, Phormio, as far as Act III., scene 2.

C.—The lectures were illustrated by references to the art-collections belonging to the College.

D.—The students prepared a portion of the text-book for each lecture ; they also wrote Latin exercises in prose and verse.

E.—Students in Arts.

F.—Thirty-one ; all matriculated. The attendance was on the whole satisfactory.

G.—Perfectly satisfactory.

H.—I have had occasion to call attention to defective sanitary arrangements.

<div align="right">B. Lewis.</div>

Report of the Professor of History and English Literature.

A. I.—History. *Ordinary course.* (1st.) Two terms. (2nd.) *First term*, nine weeks ; *second term*, between nine and ten weeks. (3rd.) Three lectures weekly : Mondays, Wednesdays, and Fridays, at 12 o'clock. History. *Honor course.* (1st.) One term. (2nd.) About six weeks. (3rd.) Number of lectures, and days and hours weekly, irregular.

N.B.—In the *ordinary History course*, 48 lectures were given during the session ; in the *Honor course*, 10 ; total, 67 lectures.

II.—English Literature. *Ordinary course.* (1st.) Two terms. (2nd.) *First term*, nine weeks ; *second term*, between nine and ten weeks. (3rd.) Three lectures weekly : Mondays, Wednesdays, and Fridays, at 10 o'clock. English Literature. *Honor course.* (1st.) Two terms. (2nd.) Thirteen weeks. (3rd.) Number of lectures, and days and hours weekly, irregular.

N.B.—In the *ordinary English Literature course*, 54 lectures were given during the session ; in the *Honor course*, 39 ; total, 93 lectures.

III.—The English Language. *Ordinary course.* (1st.) One term. (2nd.) Between nine and ten weeks. (3rd.) Three lectures weekly : Tuesdays and Thursdays, at 11 o'clock, Saturdays at 10 o'clock.

N.B.—In the *English Language course*, 28 lectures were given during the session.

The total number of lectures in the three subjects (History, English Literature, the English Language), was 188.

B. I.—History. *Ordinary course*, the History of Great Britain and Ireland from 1589 to 1815. *Honor course*, the History of France during the same period. Text-books criticized.

II.—English Literature. *Ordinary course*, History of English Literature from Chaucer to the present day, with special critical studies of Shakspere (*King John*) ; Milton (*Paradise Lost*, Books I. and II.) ; Pope (*Essay on Man*) ; Burke (*French Revolution*) ; Byron (*Childe Harold*, Cantos III. and IV.) ; Macaulay (*Essays on Clive and Warren Hastings*). *Honor course*, special critical studies of Shakspere (*Julius Cæsar* and *Henry V.*) ; Bacon (*Essays*) ; Pope (*Satires* and *Epistles*) ; Gray (*Elegy*, *Bard*, and *Progress of Poesy*) ; Burke (*Two Speeches on America*) ; Scott (*Kenilworth*) ; Wordsworth (*Excursion*, Book I.). Text-books, the Clarendon Press series recommended, when available.

III.—The English Language. *Ordinary course*, History and Illustrations of the Development of the Language from the Teutonic Settle-

ments in Britain to the present day. A Sketch also of the History of *Appendix 0.* English Literature from *Beowulf* to the *Canterbury Tales* was included *Reports* in the course. Text-books recommended, Morris (*Historical Outlines*) of the *the* Rask (*Anglo-Saxon Grammar*); Chaucer (Prologue to the *Canterbury* *Professors.* *Tales*, edited by Morris).

C.—The Historical portions of the lectures are generally illustrated by reference to maps.

D.—In the *English Language* course, lessons appointed in the *Historical Outlines of English Accidence*; in Anglo-Saxon Grammar, in the English of Chaucer; there are set for English Essays; exercises required in paraphrasing Old English, in Historical Analyses, &c. In *English Literature* course, exercises in Literary Criticism, &c.

E.—Faculty of Arts.

F. I.—HISTORY. Ordinary course, 7 (matriculated); Honor course, 2 (matriculated).

II.—ENGLISH LITERATURE. Ordinary course, 6 (matriculated); Honor course, 2 (matriculated).

III.—THE ENGLISH LANGUAGE. Ordinary course, 26 (matriculated). Attendance in all classes was very good.

G.—Good.

<div align="right">G. F. ARMSTRONG.</div>

REPORT OF THE PROFESSOR OF MODERN LANGUAGES.

A.—I. There were three courses of lectures on the French language and literature during the session: the first (1st division) for students of the second year; the second, senior French (2nd division); and the third (3rd division) junior French.

2. There were three lectures a week in each division during three terms, from 12 to 3.

3. The first term comprised nine weeks; the second, seven weeks; and the third, seven weeks.

B.—The lectures were on the French language and literature, and comparative grammar, with reading, exercises, compositions, and translations; the text-books being Demogeot's *Littérature Française* and *Textes Classiques.*

C.—This department requires no illustrations, &c., &c.

D.—The instruction given is chiefly tutorial; one lecture a week only being given on the syntax, literature, and comparative grammar—the other days being taken up with reading and translations.

E.—The students in the three divisions belonged to the Faculties of Arts and Medicine, and to the Engineering Department.

F.—The number of students was as follows: 1st division, 4; 2nd division, 32; 3rd division, 51.

G.—The general conduct of the students has been very satisfactory.

H.—The general condition of the rooms and attendance excellent.

<div align="right">R. DE VERICOUR.</div>

REPORT OF THE PROFESSOR OF LOGIC AND METAPHYSICS.

A.—On Logic and Metaphysics.—1. Logic, one term; Metaphysics, two terms. 2. First term, eight weeks; second term, eleven. 3. Logic, Tuesdays, Thursdays, and Saturdays, at eleven o'clock. Metaphysics, Tuesdays and Thursdays, at one o'clock, and on Saturdays, at twelve o'clock.

B.—Logic, Deductive and Inductive—Fowler and Jevons, parts of Thomson, Mill, and Bain. Metaphysics—History of Philosophy and Psychology ; Sir W. Hamilton's Lectures.

C.—No illustrations are used except such as are drawn or written on the board during the course of the lectures.

D.—Both the professorial and tutorial systems are used.

E.—Logic, second year's students in Arts ; Metaphysics, third year's students in Arts.

G.—Conduct of students in the class-room unexceptionable.

H.—Satisfactory.

<div align="right">G. S. READ.</div>

Report of the Professor of Mathematics.

A.—1. The course of lectures were delivered to two classes consisting, one of the first year's students in Arts and Engineering, and the other of second year's students in these faculties. The lectures extended over the three terms.

2. In the first term there were nine weeks of lectures ; in the second, eleven ; and in the third, six.

3. The hours of lectures in the second year were 1–2 on Mondays, Wednesdays, and Fridays ; for the junior division of the first year's class they were from 12–1 on Mondays, Wednesdays, and Fridays ; and to the senior division on Tuesday at 9, Wednesday at 12, and Friday at 9. Besides these regular lectures, many hours were devoted to tutorial instruction of the students, of which no account was kept.

B.—The first year's course of lectures extended over Arithmetic, Algebra, Geometry, and Trigonometry, and the text-books recommended for perusal were—Wilson's "Elementary Geometry" (third edition), Euclid, Book VI., Todhunter's Elementary and more advanced Algebra, Gross' "Algebra," Todhunter's "Elementary Trigonometry," and Todhunter's "Trigonometry," Salmon's "Higher Algebra." The subjects of lecture for the second year were—Analytical Trigonometry, Spherical Trigonometry, Geometry of Elementary Solid Figures, Plane Co-ordinate Geometry, Geometrical Conic Sections, Differential Calculus, Integral Calculus.

Text-books recommended—Todhunter's "Trigonometry," Todhunter's "Spherical Trigonometry," Todhunter's "Theory of Equations," Todhunter's "Co-ordinate Geometry" and Salmon's "Conic Sections," Williamson's "Differential Calculus," Williamson's "Integral Calculus."

C.—The only illustrations given were figures and diagrams on the black board.

D.—Exercises were set regularly in each class, and there were also frequent oral examinations, and also written examinations in different periods of the course, according to the natural subdivisions of the subjects.

E.—The students attending these lectures were either Arts or Engineering students.

	Arts Students.		Engineering Students.	
	Matriculated.	Non-Matriculated.	Matriculated.	Non-Matriculated.
F.—First Year,	26	1	7	...
Second Year,	1	...	1	...

Attendance was fairly satisfactory.

G.—General conduct excellent ; discipline good.

H.—As to the condition of the department, I have to repeat what I have frequently said before about the unwholesomeness of the stove in the lecture-room; otherwise there is no cause for complaint in regard to it. The adjoining private-room, which might be of great use if it were comfortable, is still so draughty, notwithstanding the recent efforts to improve it, that it can scarcely be much used except for reading, except in very fine weather.

C. NIVEN.

Appendix C.

Reports of the Professors.

REPORT OF THE PROFESSOR OF NATURAL PHILOSOPHY.

A.—Four courses of lectures, each three hours ; nine weeks in the first, ten in the second, six in the third. In the classes of Mathematical Physics three lectures were delivered in each week ; in the other classes two lectures weekly.

B.—In Mathematical Physics the subjects were—Mechanics, Optics, Hydrostatics, Astronomy. In Engineering Physics—Practical Mechanics, Thermodynamics. In Experimental Physics—Hydrostatics, Heat, Light, Magnetism, and Electricity.

Text-books.—In Mathematical Physics—Newth's "Mechanics," Todhunter's "Statics," Tait and Steel's "Dynamics," Parkinson's "Optics," Godfray's "Astronomy." In Experimental Physics—Everett's translation of Deschanel's Physics, Genot's "Traité de Physique."

C.—The lectures were illustrated by experiments.

D.—In Mathematical and Engineering Physics the tutorial method of instruction was chiefly adopted.

E.—The course of Experimental Physics was attended by students of the first year in Medicine and second year in Engineering. The senior class of Mathematical Physics by students of the third year in Engineering, the junior class of Mathematical Physics by students of the second year in Arts. Engineering Physics by students of the third year in Engineering.

F.—Experimental Physics, 35. Senior class of Mathematical Physics, 4. Junior class of Mathematical Physics, 13. Engineering Physics, 8. The attendance was regular.

G.—The general conduct of the students was most satisfactory.

H.—When the improvements in the Physical Laboratory, now in process of being carried out, are completed, the arrangements for the department will be satisfactory.

JOHN ENGLAND.

REPORT OF THE PROFESSOR OF CHEMISTRY.

A.—Two courses, one on Theoretical and the other on Practical Chemistry. The former extended over three, and the latter over two terms. Theoretical Course, three lectures weekly, at 11 o'clock. Practical course, six lectures weekly, five at 2 and one at 11 o'clock (Saturday).

B.—The Theoretical course embraced both Inorganic and Organic Chemistry. In the Practical course, Qualitative Analysis was taught. Text-books recommended—Fownes, Roscoe and Nuget, Schorlemmer's Chemistry of Carbon Compounds, Armstrong's Organic Chemistry, Galloway's Qualitative Analysis.

C.—The lectures were illustrated by diagrams, experiments, and specimens.

D.—Both the tutorial and professorial methods were employed.

E.—The lectures were attended by Arts, Engineering, and Medical students.

F.—The Theoretical Course was attended by 40 matriculated and 8 non-matriculated students, and the Practical Course by 47 matriculated and 5 non-matriculated students. Attendance very good.

G.—The conduct of the students was excellent.

H.—The arrangements for carrying on the business of the departments are quite satisfactory.

MAXWELL SIMPSON.

REPORT OF THE PROFESSOR OF NATURAL HISTORY.

A.—1. Seventy-two lectures ; three terms. 2. In the first, 8 ; in the second, 11 ; in the third, 6 weeks of lectures. 3. Three, from 3 to 4, P.M., on Monday, Wednesday, and Friday.

B.—Zoology and Botany, including the general principles of Biological Science. The text-books were those of Henfrey, Hooker, Huxley, and Macalister.

C.—The lectures were illustrated by reference to specimens and drawings.

D.—Tutorial instruction was seldom employed. There were herborizations at the end of the third term.

E.—Students of the third year in Arts, of the first in Medicine.

F.—Thirty-eight students attended, namely—4 in Arts and in Medicine 34, of whom 7 were non-matriculated. Five students attended diligently ; 29 duly ; and 4 were disqualified for insufficient attendance.

G.—The general conduct of the students was very good. So, likewise, was the state of discipline.

H.—As stated in previous report.

J. REAY GREENE.

REPORT OF THE PROFESSOR OF GEOLOGY AND MINERALOGY.

A.—The course of lectures delivered by the Professor extended over the first and second terms of the session ; the first included 9 and the second 11 weeks. The number of lectures delivered each week was 3, the days being Tuesdays, Thursdays, and Saturdays. The hour on the former days was from 2 to 3, P.M., and on Saturdays, from 12 to 1, P.M. The total amount of lectures in the course was 60.

B.—The course embraced Geology, Palæontology, Physical Geography, and Mineralogy, the text-books used being Lyell's Student's Elements of Geology, Jukes' Manual of Geology, Lyell's Principles of Geology, Nicholson's Palæontology, Herschell's Physical Geography, Rutley's Mineralogy, and Nicol's Elements of Mineralogy.

C.—Maps, diagrams, sections, specimens, and models were used in illustrating the lectures.

D.—The method of instruction was professorial. Near the end of the course excursions were made for practical instruction in Geology and Mineralogy.

E.—The students attending the course were of third year's Arts and first year's Engineering students.

F.—The number attending the lectures was 9, all being matriculated, and the attendance good.

G.—The conduct of the students during lectures was, in all respects, satisfactory, and the discipline very good.

H.—As concerns fitments, cleanliness, and accommodation, these were all such as the Professor could desire.

ROBERT HARKNESS.

SCHOOL OF ENGINEERING.

REPORT OF THE PROFESSOR OF CIVIL ENGINEERING.

A.—1. Each course extends through three terms. 2. First term, 9 weeks ; second term, 11 weeks ; third term, 5 weeks. 3. Three lectures per week in each course. Students of first year, Monday, Wednesday, Friday, 10, A.M. ; second year, Tuesday, Thursday, Saturday, 10, A.M. ; third year, Monday, Wednesday, Friday, 12, noon. Office open, Tuesday, Thursday, Friday, 10, A.M., to 2, P.M.

Number of lectures, 75 to each class. Total, 300.

B.—*First year.*—Descriptive Geometry ; Orthographic Projection ; Shadows ; Isometric Projection ; Perspective ; Elements of Ornamental Architecture. Text-books: Hall's "Descriptive Geometry" ; "Engineer and Machinist's Drawing Book" ; Rickman's "Architecture." *Second year.*—Surveying, Levelling, and Mensuration. Text-books: Rankine's "Civil Engineering" ; Cotton's "Manual of Railway Engineering." Oblique Bridges ; Text-book : Buck's Treatise. Hydraulics ; Text-books: Downing's "Hydraulics" ; Neville's "Hydraulic Formulæ." *Third year.*—Materials used in Construction ; Strength of Materials ; Stresses in Structures ; Principles of Construction of Bridges, Roads, Railways ; Supply of Towns with Water. Text-books: Rankine's "Civil Engineering" ; Stoney's "Theory of Strains in Girders" ; Fairbairn's "Iron Manufacture" ; Shelley's "Workshop Companion" ; Barry's "Railway Appliances" ; references to many of the books in the Library. *Drawing Office.*—First year students are employed in drawing the problems given at lectures, and easy examples of their application, and in shading simple bodies ; those of the second and third year in making working drawings of examples of the subjects of lectures, and in mapping.

C.—Illustrated by reference to maps, drawings, and instruments.

D.—Both the tutorial and professorial methods of instruction are employed, according to the subject of lecture. Instruction in the field is given (see class-roll). The apparatus for the purpose having been completed, experiments on the strength of cement briquettes were made with the third year's classes.

E.—Students in the department of Civil Engineering.

F.—Students of first year, Matriculated, 7   Non-matriculated, 1
,, second year, ,,   3   ,,   —
,, third year, ,,   8   ,,   —
Attending special classes, ,,   1   ,,   —
                                     ——   ——
                                     19   1
                                                          ——
                                     20

The attendance of most of the students has been good.

G.—Conduct of students generally good.

H.—The condition of the department has undergone little change during the last few years.

ALEXANDER JACK.

FACULTY OF LAW.

REPORT OF THE PROFESSOR OF JURISPRUDENCE AND POLITICAL ECONOMY.

A.—1. In Political Economy, and in Jurisprudence, 2 terms each.

2. In first term, in Political Economy, 4 weeks ; in Jurisprudence 2 weeks. In second term, in Political Economy, 4 weeks ; in Jurisprudence, 4 weeks.

3. Four lectures weekly in each class.

B.—In Political Economy the books recommended are—Mill, A. Smith, Goschen, Mills, &c. ; in Jurisprudence—Maine, Austin, Stephen, &c.

C.—None.

D.—The method almost wholly tutorial ; portions of text-books almost daily set for lessons ; examinations and discussions of the subject almost daily.

E.—In Political Economy, third year's Arts ; in Jurisprudence, first year's Law.

F.—In Political Economy, 3 matriculated ; in Jurisprudence, 2 matriculated.

G.—Very good.

H.—Sufficient.   R. H. MILLS.

Report of the Professor of English Law.

A.—The lectures delivered in the First Term of the session commenced on the 1st, and were continued until the 22nd of December. In that Term only eight lectures (instead of twelve as usual), were delivered to one class ; this was caused by the circumstance that students who are apprentices to attorneys, and who desire to attend the law lectures in this College, cannot do so at the periods usually fixed (shortly after the close of Michaelmas and Hilary Law Terms), as the lectures in Dublin of the "Incorporated Society of Attorneys," &c. are delivered during Term, and continued to a period long after Term has ended. By the rules of the Society attendance on these lectures is rendered compulsory on every apprentice, and no recognition is given by the Council of the Society to the Law Lectures of any College or other body in substitution for those delivered by their own lecturer. In the Second Term (16th February to 14th March), the usual number (twenty-four) of the course was completed ; the lectures were for the same cause not commenced at so early a period as usual, and (no more than four lectures having been delivered in any week), were necessarily continued to a later date, causing inconvenience to the same class, whose attendance at the assize courts (then sitting) is desirable.

B.—The history and principles of the Law of Real Property occupied the attention of the class of the first year ; the subjects being treated of in the order of the chapters in Mr. Joshua Williams' work, which is used as the text-book. The constitution, jurisdiction, and procedure of Courts, with especial reference to Criminal Law, Evidence, &c., formed the subject of readings and examinations with the senior class. The text-books were the third and fourth volumes of Mr. Sergeant Stephen's Commentaries.

C.—Illustrations are given by reference to cases, and their bearing on the matter treated of explained.

D.—Portions of the text-books and other suitable reading are pointed out for study, and questions asked on the subject of the readings, so as to ascertain the progress made by them.

E.—Law.

F.—Three.

G.—The conduct of the students was satisfactory in every respect.

H.—Some difficulty arises often in obtaining a vacant class-room in which to lecture.

                                 MARK S. O'SHAUGHNESSY.

FACULTY OF MEDICINE.

REPORT OF THE PROFESSOR OF ANATOMY AND PHYSIOLOGY.

A.—Three courses, five and sometimes six days weekly, during the first, second, and part of the third term. Anatomy and Physiology at one o'clock; Practical Anatomy at twelve o'clock. Anatomy and Physiology, 119 lectures and examinations; Practical Anatomy, 142 demonstrations.

B. I.—*Anatomy and Physiology*.—(1.) Histology, an account of the tissues of the body; (2), the Anatomy and Physiology of the organs of digestion, respiration, circulation, excretion, and reproduction; (3), the Anatomy and Physiology of the lymphoid organs, brain, spinal cord, organs of special sense and voice; (4), Embryology, including a description of the development of the principal organs. As the subjects embraced in this course cover a very extensive field, a few of them are treated of only in alternate sessions. *Text-books*—Quain's "Anatomy" and Kirke's "Physiology." Senior students are recommended to read in addition Foster's "Text-book of Physiology," Carpenter's "Human Physiology," Frey's "Histology."

II.—*Histology and Practical Physiology*.—Instruction in this department will be given next session in the *Physiological Laboratory*, which has been lately provided with microscopes and the apparatus necessary for performing experiments on circulation, respiration, innervation, &c. *Text-books*—Foster's "Practical Physiology," Schäfer's or Rutherford's "Histology," and for senior students, "Handbook for the Physiological Laboratory," by Burdon Saunderson, Klein, &c.

III.—*Practical Anatomy.*—The Anatomical Demonstrations are given on five days in the week by the Senior Demonstrators, and occasionally by the Professor of Anatomy. The course includes—(1), the Descriptive Anatomy of the bones and ligaments; (2), the Topographical Anatomy of the limbs, head, and neck, and all the thoracic and abdominal cavities, with the exception of the viscera. *Senior division of the class*.— The Professor of Anatomy has a special meeting of the senior division of the class every Tuesday, when the more abstruse subjects of the course are discussed. *Junior division of the class.*—The Junior Demonstrator meets the junior students *every* Wednesday after Christmas at 10 o'clock, A.M., for special instruction in Osteology. The dissecting-room is open from 8 o'clock, A.M., till 4 o'clock, P.M., daily; and the dissections of the students are superintended by the Professor, Demonstrators, and Prosectors of Anatomy. *Text-books*—Ellis's "Demonstrations" and Quain's "Anatomy." For consultation—Holden or Wagstaffe's "Osteology," Gray's "Anatomy," Holden's "Medical and Surgical Landmarks," Cruveilhier's "Anatomy."

C.—The lectures and demonstrations are amply illustrated by diagrams, plates, models, moist and dry specimens from the Anatomical Museum, microscopic preparations, recent dissections and experiments.

D.—In Anatomy and Physiology *oral* examinations are frequently held, usually on Wednesday or Saturday; there are also written examinations immediately after Christmas, as well as at the close of the session. In Practical Anatomy *oral* examinations are held weekly.

E.—*Faculty of Medicine.*

F.—In Anatomy and Physiology—matriculated students, 51; non-matriculated, 7 (=58).

In Practical Anatomy—matriculated students, 111; non-matriculated, 16 (=127).

Attendance on both classes good.

G.—Excellent,

E

H.—As soon as the contemplated improvements have been completed, the anatomical department will be in a very satisfactory condition. There is still, however, a deficiency in diagrams, osteological specimens, and physiological apparatus. I strongly recommend the establishment of a summer session in the Medical School, so as to relieve the pressure at present existing on the time and energies of the medical student.

J. J. CHARLES.

REPORT OF THE PROFESSOR OF MATERIA MEDICA.

A.—Six months. Sixty-four lectures. Three lectures weekly, Tuesdays and Thursdays, 3 to 4 o'clock; Saturday 12 o'clock, noon, to 1 P.M.

B.—Pharmacology. Pharmaco-dynamics, Therapeutics. The action of Medicinal Substances on the healthy animal. Their action in disease. Materia Medica, including a classification of Medicines. A systematic description of drugs, their physical and chemical characters. Posology. Formulation.

The only text-book adopted is the British Pharmacopœia. The College possesses an extensive library of works on this subject, to which the students are from time to time referred.

C.—The lectures are illustrated by chemical experiments. Specimens of the drugs named in the British Pharmacopœia, and of other drugs of recognized therapeutic value. Dry specimens of medical plants. Recent specimens, when obtainable. Verification of the purity of the drugs supplied to the museum by the application of the tests put forward in the British Pharmacopœia, and of other tests. The application of the microscope for similar purposes, and occasionally experiments on living animals.

D.—Certain portions of the British Pharmacopœia are commenced on Saturday as the subject for examination on Saturday following.

E.—Faculty of Medicine.

F.—Sixty-two students. The attendance was very regular.

G.—Conduct of the students was invariably good, and discipline excellent.

H.—With respect to supplies, cleanliness, and attendance I have nothing to complain, but the fitments and accommodations leave us imperfect as they were last year. These defects, however, will be remedied next session if the proposed additions to the medical building are completed in due time.

I may be here permitted to observe that the position of the medical department of this College cannot, in my opinion, be raised to that of a first class medical school, until a regular summer session be established, an arrangement which exists, and is found to be indispensable in all the medical schools of this kingdom, with, I believe, the exception of the schools connected with the Queen's Colleges of Cork and Galway. My reasons for forming this opinion are—1st. The lectures, as arranged at present, are too crowded together. The student is hurried from one lecture-room to another, and has no time to digest what he receives. 2nd. The lecturer is equally hurried; he is confined to a bare hour, has no opportunity, except by trenching on this hour, to prepare his experiments, put up his diagrams, &c., and answer any questions the members of his class may desire to ask him, after lecture. 3rd. In consequence of the block thus caused, should a professor be unable from any cause to deliver a lecture, he has no opportunity to remedy the loss so caused to the student. 4th. The College, so far as the medical department is con-

cerned, is closed for half the year, and thus the advantages it offers in libraries, museums, botanic gardens, &c., are, to a great extent, lost to the student. 5th. Certain subjects, notably and for obvious reasons, Botany, of the Materia Medica, and others, which it may be considered out of place for me to specify, could be better taught in summer than in winter.

MATTHIAS O'KEEFFE.

REPORT of the LECTURERS on MEDICAL JURISPRUDENCE.

Medical portion.

A.—Twenty-four lectures. Three weekly, on Monday, Wednesday, and Friday, at 2 o'clock, P.M.

B.—Medical Jurisprudence. Thanatology. Examination of the dead body—Forms of violent death—Signs of—Wounds—Stains—Hair, &c. Disputed sexual relations. Disputed mental aberration. Toxicology.

C.—Specimens of the various poisons. Recent specimens of the most important indigenous poisonous plants—Experiments on animals—Chemical analysis of poisoned articles of food, and of the viscera and their contents in animals poisoned.

D.—Not considered necessary in this subject.

E.—Faculty of Medicine.

F.—Thirty-two students.

G.—Most excellent.

H.—The condition of the department as to fitness and accommodation was as bad as that described in my last report. This disadvantage will be removed by the new buildings in contemplation.

I must here be understood to repeat my opinion as to the necessity for a Summer Session, and that the subject of Medical Jurisprudence ought to be one of those embraced in a Summer Course.

MATTHIAS O'KEEFFE.

Legal portion.

A.—The portion (one third) of the course which it is my duty to deliver was given before the close of the first term.

B.—The matter was divided into subjects belonging to (1) Forensic Medicine ; (2) Medical Police, attention being particularly directed to those points in which the peculiar and special knowledge of a medical man may be most usefully, employed in legal investigations whether civil or criminal in their nature.

C.—Illustrations were given by references to cases on the subjects treated of in Truill's Outlines, and the works by Dr. Taylor, Beck, Casper, Paris and Fonblanque, Winslow, Mayo, Bucknill, &c.; and the bearing upon them of the state of the law explained from the Treatises of Sir V. Russell, Sergeant Woolrych, Sergeant Stephen, and other approved legal authorities. The Irish Sanitary Acts and the law and practice in relation to lunatics, and to coroners' inquests, also formed the subject of readings. Suggestions as to study are given.

D.—No more than four lectures were delivered in each week during the period.

E.—Medicine.

E 2

F.—33 returned on the roll, of whom 2 were absent during the course. Of the remaining 31, 10 lectures and upwards of the 12 lectures delivered were attended by 23 students.

G.—The conduct of the class was good.

H.—I have no requirement to make.

MARK S. O'SHAUGHNESSY.

REPORT OF THE PROFESSOR OF SURGERY.

A.—Practice of Surgery. 1st. Commencing November 3rd, ending May 1st, three terms. 2nd. Three lectures every week during the three terms. 3rd. Three lectures weekly, on Tuesdays and Thursdays from 4 until 5 o'clock, and on Saturday from 1 to 2 o'clock.

B.—The Theory and Practice of Surgery, and Operative Surgery. Holmes, Bryant, Erichsen.

C.—Pathological preparations, Diagrams, Operations on the subject.

D.—Occasional examinations.

E.—Faculty of Medicine.

F.—General regularity of attendance very good. Matriculated, 32; non-matriculated, 2.

G.—The general conduct of the students, and the general state of discipline of the class, has been unexceptionably excellent.

H.—The department is deficient in supplies and fitments, and its proximity to the dissecting room is very objectionable, but is good and suitable in other respects.

W. K. TANNER.

REPORT OF PROFESSOR OF MIDWIFERY.

A.—Lectures on Midwifery. Duration, six months. About 60 lectures. Three lectures weekly, Monday, Wednesday, Friday, at 4 o'clock.

B.—Course of lectures on Midwifery. Physiology of reproduction and gestation. Parturition in its various bearings, theoretical and practical. Diseases of childbed. Management of infants.

C.—Large coloured diagrams, plates, models, casts, anatomical and other preparations, &c.

E.—Students of the Faculty of Medicine.

F.—Matriculated students,	22
Non-matriculated,	5
Total attending the course,	27

Attendance generally very regular.

G.—General conduct and discipline of the students very good.

H.—The department is very deficient in the necessary preparations, &c., for the illustration of the lectures. A complete Obstetric Museum is a great desideratum.

J. R. HARVEY.

REPORT OF THE PROFESSOR OF THE MEDICINE.

A.—Lectures on the Practice of Physic. Delivered in three terms of variable duration, on Mondays, Wednesdays, and Fridays, at 3 o'clock.

B.—The course embraces all subjects belonging to Theory and Practice of Physic, commencing with fevers, and then passing to the diseases of organs situated in the head, the chest, and the abdominal cavity.

Diseases of blood origin are introduced at convenient parts of the course.

Test-books.—Watson, Tanner, Flint on Practice of Physic.

   C.—Lectures illustrated by Pathological specimens and plates.

   D.—The classes are occasionally examined during the course.

   E.—Students of the Medical Faculty.

   F.—Thirty students attended. I am not furnished with the means of knowing the matriculated from the non-matriculated.

   G.—Nothing could be better than the conduct of these students.

   H.—As many very necessary improvements are about to be made in this department it is not necessary to refer to them in detail.

<div align="right">DENIS C. O'CONNOR.</div>

No. XII.—REPORT OF LIBRARIAN FOR SESSION 1876–77.

The number of volumes in the Library at the date of this Report is 22,659. They may be classified as follows:—

Mathematics {Pure,	.	849	European Language, &c., .	1,761
{Mixed,	.	770	Celtic	83
Chemistry, . . .	.	1,043	History, Antiquities, &c., .	3,278
Botany and Zoology, .	.	1,865	Biography, . . .	594
Medical Sciences, .	.	2,856	Geography, Voyages, &c. .	657
Theology, &c., . .	.	382	Engineering, . . .	568
Logic and Metaphysics, .	.	468	Agriculture, . . .	224
Jurisprudence, &c. .	.	648	Fine Arts, . . .	225
Education, . . .	.	233	Bibliography, . .	120
Law, ...	.	940	Encyclopædias, . .	634
Ancient Classical Literature,	.	2,044		
Sanscrit, &c., . .	.	114	Total, . . .	22,659
Geology, . . .	.	766		
English Language, &c.,	.	1,584	Increase over last year, .	1,141

Of these 1,141 volumes, 629 were presented, the remainder purchased by the Council of the College.

The Library has suffered no loss in any description of property since date of last report.

Discipline is excellent. There was no complaint of any kind during the session.

The proposed alteration in the windows, by substituting plate glass for the original small diamond-shaped panes, will obviate the draughts hitherto so much complained of and largely increase the light. The heat and ventilation will then be still more satisfactory than heretofore.

One hundred and twenty volumes have been bound during the year.

The very munificent present of many books of great rarity and value to the Library by William Crawford, of Lakelands, county Cork, esq., has considerably increased our number; and I beg to observe that the space in the Library is altogether inadequate, not only to the annual increase of the books, but to the suitable accommodation of such gifts as we have just received. This defect requires immediate attention.

I am again requested by many gentlemen engaged in historical inquiries to express their gratitude for the privilege accorded them of access to the Library, and many circumstances point favourably to our future.

The series of historical documents published under the direction of the Master of the Rolls, are constantly sought after by literary inquirers; and other works of a similar nature, which, from their great cost and rarity, are, I regret to say, at present apparently beyond our reach.

The General Catalogue of the Library is proceeding most satisfactorily.

<div align="right">RICHARD CAULFIELD, LL.D., *Librarian.*</div>

No. XIII.—BURSAR'S ANNUAL ACCOUNT OF THE RECEIPTS
AND EXPENDITURE OF QUEEN'S COLLEGE, CORK.

*General Abstract of the Receipts and Expenditure of the College, from 1st
April, 1876, to 31st March, 1877.*

DR.				£	s.	d.		£	s.	d.
To Balance on 1st April, 1876—General Account,				747	12	11½		807	13	1½
	Library Deposits,			60	0	2				
" Amounts received from Paymaster-General—										
Endowment less Income Tax),							5,995	5	8	
Special Parliamentary Grant in aid of Professors' Salaries,							543	15	4	
Additional Parliamentary Grant for maintenance of the College,							1,500	0	0	
" College Fees and Fines,							70	15	8	
" Professors' Class Fees,							1,599	10	0	
" Library Deposits,							22	0	11	
" Dividend on £1,959 12s. 7d., Three Per Cent. Stock,							51	4	11	
" Miscellaneous,							1	14	0	
		Total,						£11,540	17	6½

CR.				£	s.	d.		£	s.	d.
By Amount paid for Salaries—										
President, Professors, and Officers,				4,968	8	11				
Scholarships, Prizes, and Exhibitions,				1,112	15	0				
Minor Officers, Porters, and Servants,				470	1	0				
" Payments on account of Special Grant,				543	1	0				
" Payments on account of Additional Grant, Fees and Fines,				1,583	6	10½				
" Payments on account of Professors' Class Fees,				1,599	10	0				
" Library Deposits repaid,				32	0	0				
" Balance on 31st March, 1877—										
General Account,				£1,079	11	4		1,166	11	4
On Library Deposits,				87	0	0				
								£11,540	17	6½

In addition to the Cash Balance there is standing to the credit of the College £1,283 15s. 7d., Government
New Three Per Cent. Stock.

ACCOUNT OF THE EXPENDITURE OF THE PARLIAMENTARY GRANT of £1,500 for
MAINTENANCE OF THE COLLEGE, and of the COLLEGE FEES and FINES for the
YEAR ending 31st March, 1877.

DR.							£	s.	d.
To Amount received from the Paymaster-General,							1,500	0	0
" College Fees and Fines,							70	15	8
		Total,					£1,570	15	8

CR.				£	s.	d.		£	s.	d.
By Amount expended on Library—										
Ancient and Modern Languages,				£190	12	9				
Mathematical and Physical Sciences,				43	4	0				
Natural Sciences,				63	14	8				
Engineering,				9	0	0		508	7	9½
Medical Sciences,				36	6	0				
Mental and Legal Science,				51	0	0				
General Library,				28	5	0½				
Binding,				46	14	7				
By Amount expended for Apparatus, Diagrams, Materials, Museums—										
Chemical Laboratory,				£102	12	1				
Physical Cabinet,				144	11	7		481	11	2½
Engineering Department,				9	3	4				
Physiological Cabinet and other Medical Departments,				214	16	1½				
Museum,				10	8	6				
By Amount expended in Heating and Lighting,							266	19	11½
" Botanic Garden and Grounds,							174	16	7
" Printing, Stationery, Advertising,							109	15	5
Miscellaneous Expenditure—										
Travelling Expenses,				£5	5	0				
College Dues Repaid,				5	5	0				
Porter's Clothing,				56	4	8		124	5	8
Water Supply,				11	8	0				
Incidentals,				44	0	5				
Postage,				4	19	2½				
Balance,							5	5	7½
							£1,570	15	8

(Signed),　　JOHN ENGLAND, M.A., *Bursar.*

The account of the College for the year ending the 31st of March, 1877, of which the above is an abstract
has been signed and passed by the Auditor-General.

APPENDIX D.

No. XIV.

Faculty of Arts.

SESSIONAL EXAMINATIONS—FIRST YEAR.

GREEK.

Examiner—Professor BOULGER.

1. Write out in full the declension of the following :—μήτηρ, βοῦς, γόνος, κείμην, ναῦς.

2. Give the comparative and superlative mac. singular masc. of the following adjectives :—σοφός, εὔφρων, γεραιός, σώφρων, αἰσχρός, ῥᾴδιος.

3. Write out in full the perfect passive of λύω, the aorist act of τίθημι, and the imperfect passive of ἵστημι.

4. Give the infinitive, subjunctive, optative, and imperative moods of οἶδα.

5. Give the first person singular present indicative of the following forms— ἄγω, πέτταμαι, βιβάω, ἵζω, ἐδθόθην, ἐτάθην, ἕλιξα.

6. Form verbal stems from the following :—λείπω, πράσσω, φθείρω, εἵω, νίζω, τρώγω.

I. **Translate**:—

II. XENOPHON—*Anabasis*, IV., vi., 10–15.

μετὰ ταῦτα Ξενοφῶν εἶπεν, Ἐγὼ δ' οὕτω γιγνώσκω. εἰ μὲν ἀνάγκη ἐστι μάχεσθαι, τοῦτο δεῖ παρασκευάσασθαι ὅπως ὡς κράτιστα μαχούμεθά· εἰ δὲ βουλόμεθα ὡς ῥᾷστα ὑπερβάλλειν, τοῦτό μοι δοκεῖ σκεπτέον εἶναι ὅπως ἐλάχιστα μὲν τραύματα λάβωμεν, ὡς ἐλάχιστα δὲ σώματα ἀνδρῶν ἀποβάλωμεν. τὸ μὲν οὖν ὄρος ἐστι τὸ φαινόμενον πλέον ἢ ἐφ᾽ ἑξήκοντα στάδια, ἄνδρες δ' οὐδαμοῦ φυλάττοντες ἡμᾶς φανεροί εἰσιν ἀλλ᾽ ἢ κατ᾽ αὐτὴν τὴν ὁδόν· πολὺ οὖν κρεῖττον τοῦ ἐρήμου ὄρους καὶ κλέψαι τι πειράσθαι λαθόντας καὶ ἁρπάσαι φθάσαντας ἢν δυνώμεθα, μᾶλλον ἢ πρὸς ἰσχυρὰ χωρία καὶ ἄνδρας παρεσκευασμένους μάχεσθαι. πολὺ γὰρ ῥᾷον ὄρθιον ἀμαχεὶ ἰέναι ἢ ὁμαλὲς ἔνθεν καὶ ἔνθεν πολεμίων ὄντων, καὶ νύκτωρ ἀμαχεὶ μᾶλλον ἄν τὰ πρὸ ποδῶν ὁρῴη τίς ἢ μεθ᾽ ἡμέραν μαχόμενος, καὶ ἡ τραχεῖα τοῖς ποσὶν ἀμαχεὶ ἰοῦσιν εὐμενεστέρα ἢ ἡ ὁμαλὴ τὰς κεφαλὰς βαλλομένοις. καὶ κλέψαι οὐκ ἀδύνατόν μοι δοκεῖ εἶναι, ἐξὸν μὲν νυκτὸς ἰέναι, ὡς μὴ ὁρᾶσθαι, ἐξὸν δὲ ἀπελθεῖν τοσοῦτον ὡς μὴ αἴσθησιν παρέχειν.

II. EURIPIDES—*Hippolytus*, 373–404.

Τροιζηνίαι γυναῖκες, αἵ τόδ᾽ ἔσχατον
οἰκεῖτε χώρας Πελοπίας προνώπιον,
ἤδη ποτ᾽ ἄλλως νυκτὸς ἐν μακρῷ χρόνῳ
θνητῶν ἐφρόντισ᾽ ᾗ διέφθαρται βίος.
καί μοι δοκοῦσιν οὐ κατὰ γνώμης φύσιν
πράσσειν κάκιον, ἔστι γὰρ τό γ᾽ εὖ φρονεῖν
πολλοῖσιν, ἀλλὰ τῇδ᾽ ἀθρητέον τόδε·
τὰ χρήστ᾽ ἐπιστάμεσθα καὶ γιγνώσκομεν,
οὐκ ἐκπονοῦμεν δ᾽, οἱ μὲν ἀργίας ὕπο,
οἱ δ᾽ ἡδονὴν προθέντες ἀντὶ τοῦ καλοῦ
ἄλλην τιν᾽. εἰσὶ δ᾽ ἡδοναὶ πολλαὶ βίου,
μακραί τε λέσχαι καὶ σχολή, τερπνὸν κακόν,
αἰδώς τε. δισσαὶ δ᾽ εἰσίν, ἡ μὲν οὐ κακή,
ἡ δ᾽ ἄχθος οἴκων. εἰ δ᾽ ὁ καιρὸς ἦν σαφής,
οὐκ ἂν δύ᾽ ἤστην ταῦτ᾽ ἔχοντε γράμματα.
ταῦτ᾽ οὖν ἐπειδὴ τυγχάνω προγνοὺς ἐγώ,
οὐκ ἔσθ᾽ ὁποίῳ φαρμάκῳ διαφθερεῖν
ἔμελλον, ὥστε τοὔμπαλιν πεσεῖν φρενός.

III. XENOPHON—*Cyropædia*, VIII., viii., 1–3.

ὅτι μὲν δὴ κάλλιστα καὶ μεγίστη τῶν ἐν τῇ Ἀσίᾳ ἡ Κύρου βασιλεία ἐγένετο, αὐτὴ ἑαυτῇ μαρτυρεῖ. ὁρισθῆ γὰρ πρὸς ἕω μὲν τῇ Ἐρυθρᾷ θαλάττῃ, πρὸς ἄρκτον δὲ τῷ Εὐξείνῳ πόντῳ, πρὸς ἑσπέραν δὲ Κύπρῳ καὶ Αἰγύπτῳ, πρὸς μεσημβρίαν δὲ Αἰθιοπίᾳ. τούτων δὲ τῶν τηλικούτων ἡ μὲν Κύρου γνώμῃ ἐκυβερνᾶτο, καὶ ἐκείνός τε τοὺς ὑφ' ἑαυτῷ ὥσπερ ἑαυτοῦ παῖδας ἐτίμα τε καὶ ἐθεράπευεν, οἵ τε ἀρχόμενοι Κῦρον ὡς πατέρα ἐσέβοντο. ἐπεὶ μέντοι Κῦρος ἐτελεύτησεν, εὐθὺς μὲν αὐτοῦ οἱ παῖδες ἐστασίαζον, εὐθὺς δὲ πόλεις καὶ ἔθνη ἀφίσταντο, πάντα δ' ἐπὶ τὸ χεῖρον ἐτρέπετο. ὡς δ' ἀληθῆ λέγω ἀρξομαι διδάσκων ἐκ τῶν θείων. οἶδα γὰρ ὅτι πρότερον μὲν βασιλεὺς καὶ οἱ ὑπ' αὐτῷ καὶ τοῖς τὰ ἔσχατα πεποιηκόσιν εἶτε ὅρκους ὀμόσαιεν, ἐπίστευον, εἶτε δεξιὰς δοῖεν, ἐβεβαίουν. εἰ δὲ μὴ τοιοῦτοι ἦσαν καὶ τοιαύτην δόξαν εἶχον, ὥσπερ οὐδὲ νῦν πιστεύει οὐδὲ εἰς, ἐπεὶ ἔγνωσταί ἡ ἀσέβεια αὐτῶν, οὕτως οὐδὲ τῶν σὺν τῇ Κύρῳ ἀναβάντων στρατηγῶν.

IV. Parse all words marked with an obelus (†) in the above.

LATIN.

Translate:—

(A.) HORACE—*Epistles*, I., xviii., 96–110.

Inter cuncta leges et percontabere doctos,
Qua ratione queas traducere leniter aevum,
Ne te semper inops agitet vexetque cupido,
Ne pavor et rerum mediocriter utilium spes,
Virtutem doctrina paret naturane donet,
Quid minuat curas, quid te tibi reddat amicum,
Quid pure tranquillet, honos an dulce lucellum,
An secretum iter et fallentis semita vitae.
Me quotiens reficit gelidus Digentia rivus,
Quem Mandela bibit, rugosus frigore pagus,
Quid sentire putas? quid credis, amice, precari?
Sit mihi, quod nunc est, etiam minus, et mihi vivam
Quod superest aevi, si quid superesse voluit di ;
Sit bona librorum et provisae frugis in annum
Copia, neu fluitem dubiae spe pendulus horae !

(B.) CICERO—*Tusculan Disputations*, ii., 5.

A. Nonne verendum est igitur, si est ita, ut dicis, ne philosophiam falsa gloria exornes? Quod est enim maius argumentum nihil eam prodesse quam quosdam perfectos philosophos turpiter vivere?

M. Nullum vero id quidem argumentum est. Nam ut agri non omnes frugiferi sunt, qui coluntur, falsumque illud Accii :

Probae etsi in segetem sunt deteriorem datae
Fruges, tamen ipsae suapte natura enitent,

sic animi non omnes culti fructum ferunt. Atque, ut in eodem similí versor, ut ager quamvis fertilis sine cultura fructuosus esse non potest, sic sine doctrina animus. Ita est utraque res sine altera debilis. Cultura autem animi philosophia est : haec extrahit vitia radicitus et praeparat animos ad satus accipiendos eaque mandat iis et, ut ita dicam, serit, quae adulta fructus uberrimos ferant.

1. Describe accurately the situation of Utica, Ilerda, Velia, Brundisium, Gabii, and Colophon.

2. Derive the words oppidum, asylum, hortus, primus, stella, and fovea.

3. Write the life of Maecenas, and quote some passages in which Horace mentions him.

4. When did Cicero compose his Tusculan Disputations?

5. Give some account of the tenets of the Stoic school of philosophy.

6. Explain the metre of the extract from Accius (B).

Translate into Latin:—

He published an edict, that the senate should return to its usual dress.

He had charged Trebonius by letter not to suffer Marseilles to be taken by storm.

His perseverance is as great as his fury.

The senate decrees, that the consuls should levy troops.

He persuades him to return to his mother.

He demands, that troops should be levied.

Translate into Latin elegiacs:—

Soon when the golden bulla has been dismissed from thy
    inexperienced neck,
And the free toga has been taken before the gods of thy
    mother,
Then to thee Apollo utters a few words from his roof,
And forbids to thunder words in the mad forum.
Not so am I placed, nor the times such to me,
That I may be able to be glad at thy arrival.

THE ENGLISH LANGUAGE.

Examiner, Professor Armstrong.

1. Give an account of the origin, character, and habits of the earliest Teutonic conquerors of Britain.

2. Describe the characteristics of the language of these people, pointing out the features which distinguish it from the Literary English of the present day.

3. Show that modern English and "Anglo-Saxon" are not distinct languages, but one and the same.

4. Explain, and illustrate in tabular form, the relationships of the English language.

5. Give examples of words in Modern English of Keltic, Latin, Greek, and Scandinavian origin, and account for their appearance in our vocabulary.

6. Write a note on the Romance languages, explaining their origin, and giving a particular account of that Romance dialect which has exercised the most important influence upon the English language.

7. Trace as well as you can the development of the East Midland dialect, and explain the causes which have led to its adoption as the literary dialect of England.

8. Paraphrase the following passage in Modern English prose; and make a metrical analysis of it, pointing out and explaining all its grammatical peculiarities:—

"For him was lever have at his beddes heede
    Twenty bookes, clad in blak o reede,
    Of Aristotle, and his philosophie,
    Than robes riche, or fidel, or sawtrie.
    But al be that he was a philosophre,
    Yet hadde he but litel gold in coffre;"

But al that he might of his frendes hente,
On bookes and on lernyng he it spente,
And busily gan for the soules preye
Of hem that yaf him wherwith to scoleye."

9. Describe the characteristics of *Beówulf* and explain the system of "Anglo-Saxon" versification.

10. Give a brief sketch of the literary history of England prior to the Norman Conquest.

11. Write a note on the Norman Romances of Chivalry.

12. Write a brief sketch of Chaucer's life; and give some details respecting the life and merits of Baccaccio, and the nature of his influence upon Chaucer.

MODERN LANGUAGES.

Examiner, PROFESSOR DE VÉRICOUR.

N.B.—The following Paper was common to Students in Arts, Engineering, and Medicine of First Year's standing.

Translate into French :—

1. Louis XIV. was born on the 5th of September, 1638. He was only five years old when he was called to the throne, after the death of Louis XIII., his father. His reign was the longest of the French monarchy, and lasted seventy-two years. During the minority of Louis, Anne of Austria, his mother, was regent, and governed France with Cardinal Mazarin, who became prime minister. The first five years of his minority were remarkable for great victories, Rocroi, Fribourg, Nordlingue, and Lens, gained by the young Duke of Enghien, called afterwards the Great Condé. Louis XIV. was twenty-two years old when he began to reign by himself, after the death of Mazarin.

2. The extensive country of which La Vendée is the centre, comprehends a much larger space than properly bears that name, as it includes a considerable portion of the departements of Maine and Loire, of Loire Inférieure, and of Les deux Sèvres, as well as La Vendée proper. The soil is not fit for the plough, but admirably adapted for the raising of cattle, and lies divided into pastures of small extent, but very rich in produce, which are scattered among groves and forests, so extensive that the whole district is known by the name of Bocage, or Thicket. The peasants inhabited small little separate farms, all were easy and independent, and none possessed overgrown wealth. They were little oppressed by the public burdens, having a dispensation from the heaviest, on condition of their maintaining the various cuts and canals by which their country is drained. These canals, joined to the extreme badness of the roads, the intervention of numerous hedges and thickets, and the frequent rains, render La Vendée very inaccessible unless to the natives, who, familiar with these difficulties, are accustomed to bound over the obstacles, by means of a pole or quarter-staff, guarded with iron, which they are wont to carry, and which, in the course of the war, they sometimes used as a formidable weapon.—SIR WALTER SCOTT.

1. State the general rule for the use of the tenses of the subjunctive.

2. Say what *on* and *y* are used for. Give examples.

3. Explain the various idiomatic uses of *on*.

4. How are the pronouns *whoever, whosoever, whatever,* translated?

5. Who were the *Trouvères* and the *Troubadours*?

6. State what you know of the life and works of one of the following authors :—Corneille, Molière, Bossuet, Madame de Sevigné.

MATHEMATICS.

Examiner, Professor NIVEN.

LOWER PAPER.

N.B.—This and the following "Higher Paper" were common to First Year's Students in Arts and Engineering.

1. If two triangles have two sides of one equal to two sides of the other, each to each, but the included angle of one greater than the included angle of the other; prove that that which has the greater angle will have the greater third side.

If the two triangles be ABC, ABC' of which the angle BAC is greater than BAC', and if the same circle goes through the points ABC'C, prove that the angle BAC' is equal to the difference of the angles ABC, ACB.

2. The square on the hypothenuse of a right-angled triangle is equal to the sum of the squares on its sides.

3. If two circles intersect the straight line joining their centres bisects the common chord at right angles.

What theorem relating to tangents may be derived from this result?

4. Of two unequal chords of a circle the greater is that which is nearer to the centre.

5. Similar triangles are in the duplicate ratio of their homologous sides.

The areas of a regular hexagon inscribed in a circle and regular hexagon circumscribed about it have to each other the ratio 3 : 4.

6. Prove that—

$$(a^3 + ab + b^2)(a^3 - ab + b^2)(a^4 - a^2b^2 + b^4) = a^8 + a^4b^4 + b^8;$$

also divide

$$x^3 + \frac{1}{x^3} = 2 \text{ by } x^2 + \frac{1}{x^2} - 1 - \frac{1}{x},$$

and factorise

$$(a - b)^4 - 16a^2b^2.$$

7. Define a fraction, and prove the rule for the multiplication of fractions.

Reduce to their simplest forms the following fractions:—

(1) $\dfrac{2x^3 - a^3 - x - 3}{2x^3 + x^3 - 2x - b^3};$ (2) $\dfrac{1}{x + 1 - \dfrac{4}{3 + \dfrac{x - 1}{x + 1}}};$

(3) $\dfrac{1}{(a + b)^3} + \dfrac{1}{3(a - b)} + \dfrac{1}{2(a + b)}.$

8. Solve the equations—

(1) $\dfrac{2x + 1}{x - 2} - \dfrac{x + 2}{x - 1} = 1.$

(2) $3x + \sqrt{6x - 5} = 5\frac{1}{2}.$

(3) $\dfrac{1}{x} - \dfrac{2}{y} = 0, \quad 5x - 3y = 3.$

9. Define ratio and proportion, and prove that

if $a : b :: c : d$ then $a + b : a - b :: c + d : c - d.$

If $a : b :: c : d :: e : f$, prove that

$ac - a^2 : bd - f^2 :: (a + c + e)^2 : (b + d + f)^2.$

10. Find the sum of n quantities in arithmetic progression.

Sum the series—

$$\frac{1}{3} + 2 + 2\frac{5}{9} + \ldots.$$

to 8 terms and to n terms.

$$n + \frac{1}{n} - \frac{2 - n^4}{n} + \ldots.$$

11. How is the present value of an annuity found? Find the present value of a perpetual annuity of £100 a year payable quarterly, reckoning interest at 3 per cent.

12. Define the trigonometrical functions, and find the sine in terms of the secant.

Find the tangents of 30°, 45°, 150°, 660°.

13. Prove the formulæ :—

$$\sin(180° - A) = \sin A,$$
$$2 \sin A \sin B = \cos \overline{A - B} - \cos \overline{A + B},$$
$$\csc 2A - \cot 4A = \tan A + \csc 4A.$$

14. Investigate formulæ (adapted to logarithmic computation), for finding the angles of a triangle in terms of the sides.

The perpendiculars from the angles of a triangle ABC on the opposite sides meet in P, prove that $AP + BP + CP = 2(R + r)$ where R and r are the radii of the circumscribing and inscribed circles of the triangle.

HIGHER PAPER.

1. If one transversal cut a pencil of four rays in a harmonic range every transversal must do so.

2. The lines drawn through the angles of a triangle ABC parallel to the opposite sides intersect in points A'B'C' which lie on the lines through the angles ABC, bisecting the opposite sides; prove this and show that no other triangle can be circumscribed to ABC having its angles on these lines.

3. Prove that the sum of the series—

$$\frac{a}{a + a} + \frac{2a^3}{a^3 + 2a} + \frac{4a^5}{a^5 + 4a} + \ldots \text{ to } n \text{ terms} = \frac{ma^m}{a^m - a^m} - \frac{a}{a - a} \quad \text{where } m = 2^{n+1}.$$

4. State and prove the rule for reducing a determinant.

Prove that—

$$\left| \begin{array}{ccc} \tan A & \cot a & \cot a \\ \cot a & \tan a & \cot a \\ \cot a & \cot a & \tan a \end{array} \right| = \frac{8 \cos^2 2a}{\sin^3 2a} \cdot (1 + \cos^3 a),$$

and solve the equations—

$$\left. \begin{array}{c} x + y - z = a \\ y + z - u = b \\ z + u - x = c \\ u + x - y = d \end{array} \right\}.$$

5. Assuming the binomial theorem true for a positive integral index prove it true generally.

Expand $(1 - 2x)^{\frac{1}{2}}$, finding the general term and the greatest term when $x = \frac{1}{3}$.

6. Assuming the expansion of e^x, deduce the multinomial theorem when the index is a positive whole number.

Find the coefficient of x^5 in $(1 - 2x + 3x^2)^{-3}$.

7. Sum the series—

$$\frac{1^2 \cdot 2 + 2^2 \cdot 3 + 3^2 \cdot 4 + \ldots}{1 \cdot 2 \cdot 6 + 2 \cdot 3 \cdot 7 + 3 \cdot 4 \cdot 8 + \ldots}$$

to n terms.

8. Given sin A, find sin $\frac{A}{2}$.

Prove that—

sin $\overline{a - \beta}$. sin $\overline{\beta + \gamma}$ + sin $\overline{\beta - \gamma}$. sin $\overline{a + \beta}$ + sin γ . sin $\overline{a - \gamma}$ sin $\overline{\gamma + 2\beta}$ = 0.

9. Given—

$$2 \sin a \cos \overline{\theta + \rho} = 2 \cos \overline{\theta - \rho} + \cos^2 a$$

and

$$2 \sin a \cos \overline{\theta + \psi} = 2 \cos \overline{\theta - \psi} + \cos^2 a$$

prove that

$$2 \sin a \cos \overline{\phi + \psi} = 2 \cos \overline{\phi - \psi} + \cos^2 a.$$

10. Find an expression for the radius of the inscribed circle of a triangle.

A tower which leans towards the south is observed from three points equally distant from its base to the north, east, and south of the tower, and the elevations of its top are found to be a, β, γ; prove that cot²a, cot²β, cot²γ are in arithmetical progression.

11. Find an expression for the area of a segment of a circle.

A string equal in length to the perimeter of an equilateral triangle is attached at an angle and is first wound round the triangle; it is then unwound completely and kept in motion till it is rewound again, being kept tight all the time; find the area which it sweeps through.

SECOND YEAR.

GREEK.

Examiner, Professor BOULGER.

1. What phonetic laws are illustrated by the following forms :— λεπτός, κομμός, δαιμόνιον, θάπτω, δέξω, μάλλων, πμϕϵις, ἐξ, δάεχος, λελυκυῖα, πέφευγα.

2. Give six substantives which reject the final consonant of the stem in certain forms.

3. Give the verbal stem for each of the following forms :—εἰμί, εἶμι, ἵημι, λείνω, ἐρέζω, βαίνω, τίπτω.

4. Give examples of the Doric future and of Attic reduplication. Distinguish ἀνέγνω from ἀνέγνω. Give the fut. and perfect (active) of χάω.

5. Point out grammatical peculiarities in the following passages:—

(a.) ὅτι τοίνυν καὶ κεκράτηκα χάριν, ὦ ξένοι Ἀθηναῖοι, παρ᾽ ὑμῶν, οὐ μόνον ἂν αὐτὸς λελυπήσομαι λειτουργίαν ἀξίων—μερφ τήν αὑτὴν γέ τις ἦν—ἀλλὰ καὶ τῶν μεγίστων, καὶ τοῦτο ἥδομαι καὶ δεξίαι.

(β.)   Ἔρως Ἔρως ὁ κατ᾽ ὀμμάτων
           στάζεις πόθον.

(γ.)   Ζεὺς σ᾽ ὁ γεννήτωρ ἐμὸς
           πρόφρελον ἐκτρίψειεν.

(δ.) θαρμῶον καὶ γυναῖκα τοιοῦτον ὃν ἂν ἐπαινῶντες τε καὶ συνηθεῖντας ἐτώβαζον.

(e.) ὧν δ᾽ ἂν καὶ πολλοῦ συνεχὲς ἐπὶ πολλὰς ἡμέρας πράττων τις φωράται οὐ μόνον ἥτινος τοῦ μὴ μετ᾽ ὀργῆς ἀπέχει, ἀλλὰ καὶ βεβουλευμένα ὃ τοιοῦτο ἀδράζεων ἐστὶν τὸ βία φανερός.

1. Translate:—

ὣς ἄρα οἱ φρονέοντι δοάσσατο κέρδιον εἶναι
τὸν δ᾽ αὐτ᾽ εἰς Εὐρ᾽ τὴν δ᾽ ἐγκλύω ὕδατος εἰσιν
ἐν περφαινομένην᾽ δουλῆς δ᾽ ἀρ᾽ ὑπῆλθε θάμνους,
ἐξ ὁμόθεν πεφυῶτες᾽ ὁ μὲν φυλίης, ὁ δ᾽ Ἐλαίης.

τοὺς μὲν ἄρ' οὖσ' ἀνέμοιο διὰς μένος ὑγρὸν ἀέντων,
οὐδὲ ποτ' ἥλιος φαείνων ἀκτῖσιν ἐβάλλεν,
οὔτ' ἔμβρος κεράασσε διαμπερὲς· ὡς ἄρα πυκνοὶ
ἀλλήλοισιν ἔφυν ἐπαμοιβαδίς· οὓς ὑπ' Ὀδυσσεὺς
δύσετ'· ἄφαρ δ' εὐνὴν ἐπαμήσατο χερσὶ φίλῃσιν
εὐρεῖαν· φύλλων γὰρ ἔην χύσις ἤλιθα πολλή,
ὅσσον τ' ἠὲ δύω ἠὲ τρεῖς ἄνδρας ἔρυσθαι
ὥρῃ χειμερίῃ, εἰ καὶ μάλα περ χαλεπαίνοι.
τὴν μὲν ἰδὼν γήθησε πολύτλας δῖος Ὀδυσσεύς,
ἐν δ' ἄρα μέσσῃ λέκτο, χύσιν δ' ἐπεχεύατο φύλλων.
ὡς δ' ὅτε τις δαλὸν σποδιῇ ἐνέκρυψε μελαίνῃ
ἀγροῦ ἐπ' ἐσχατιῆς, ᾧ μὴ πάρα γείτονες ἄλλοι,
σπέρμα πυρὸς σῴζων, ἵνα μή ποθεν ἄλλοθεν αὔῃ,
ὣς Ὀδυσεὺς φύλλοισι καλύψατο· τῷ δ' ἄρ' Ἀθήνη
ὕπνον ἐπ' ὄμμασι χεῦ', ἵνα μιν παύσειε τάχιστα
δυσπονέος καμάτοιο, φίλα βλέφαρ' ἀμφικαλύψας.

Odyssey, V., 474–493.

2. Translate and explain the following passages:

(a)   θῆρν δ' ἑπέροντε καρήατι
ἀργυρέῳ, ἐπὶ δὲ κλωΐ ἱντάνυσσεν ἱμάντι.

Ibid., I., 441, 442.

(b) Μέντορ ἀπαρτηφὲ, φρίσας ἠλὲ, ποῖον ἔειπες
ἡμέας δηρύνων καταπαύσμεν. ἀργαλέον δὲ
ἀνδράσι καὶ πλεόνεσσι μαχήσασθαι περὶ δαιτί.

Ibid., II., 243–245.

(c) ὅσσον τίς τ' ἔδαφος νηὸς τορνώσεται ἀνὴρ
φορτίδος εὐρείης, εὖ εἰδὼς τεκτοσυνάων,
τόσσον ἐπ' εὐρεῖαν σχεδίην ποιήσατ' Ὀδυσσεύς.
ἴκρια δ' στήσας, ἀραρὼν θαμέσι σταμίνεσσι,
ποίει· ἀτὰρ μακρῇσιν ἐπηγκενίδεσσι τελεύτα.
ἐν δ' ἱστὸν ποίει καὶ ἐπίκριον ἄρμενον αὐτῷ·
πρὸς δ' ἄρα πηδάλιον ποιήσατο, ὄφρ' ἰθύνοι.
φράξε δέ μιν ῥίπεσσι διαμπερὲς οἰσυΐνῃσι
κύματος εἶλαρ ἔμεν· πολλὴν δ' ἐπεχεύατο ὕλην.

Ibid., V., 249–257.

(d) λεπτὴ δ' εἰσίδμεν· τῆς δ' ὅδον ἀμφελίσασα
εἰρύσται· πᾶσαν γὰρ ὑπέρτυος ἐστιν ἱκανέτω.

Ibid., VI., 264, 265.

3. Translate:

TP. τί τὸ ᾧ παράδραμον ἔρριψέ ἔπος ;
νῦν δὴ μὲν ὄρος βᾶ' ἐπὶ θύμας
πόθον ἐστήλλου, νῦν δ' αὖ ψιμύθοις
ἀπ' ἀκτμάσντος πύλων ὥρισαι.
τᾶδε μαντείας δίξα πολλῆς,
ὅστις σε θεῶν ἀναπείθει
καὶ παρακόπτει φρένας, ὦ τᾶλ

ΦΑΙ. δύστανος ἐγώ, πόΐ γ' εὐγνεαίμαν ;
ποῖ παρεπλάγχθην τῆς ἀγαθᾶς ἀγαθᾶς ;
ἐμάνην, ἔπεσον δαίμονος ἄτῃ.
φεῦ φεῦ, τλάμων.
μαῖα, πάλιν μου κρύψον κεφαλάν,
αἰδούμεθα γὰρ τὰ λελεγμένα μοι.

κρύπτειν· κατ᾽ ὄσσων δάκρυ μοι βαίνει,
καὶ ἐπ᾽ αἰσχύνην ὄμμα τέτραπται.
τὸ γὰρ ὀρθοῦσθαι γνώμην ὀδυνᾷ,
τὸ δὲ μαινόμενον κακόν· ἀλλὰ κρατεῖ
μὴ γιγνώσκοντ᾽ ἀπολέσθαι.

ΤΡ. πρώτην· τὸ δ᾽ ἡμὶν εὖτα δὴ δὲσαε
σῶμα καθήσει;
πολλὰ διδάσκει μ᾽ ὁ πολὺς βίοτος·
χρῆν γὰρ μετρίας εἰς ἀλλήλους
φιλίας θνητοὺς ἀνακίρνασθαι,
καὶ μὴ πρὸς ἄκρον μυελὸν ψυχῆς,
εὔλυτα δ᾽ εἶναι στέργηθρα φρενῶν
ἀπό τ᾽ ὤσασθαι καὶ ξυντεῖναι.
τὸ δ᾽ ὑπὲρ δισσῶν μίαν ὠδίνειν
ψυχὴν χαλεπὸν βάρος, ὡς κἀγὼ
τῆσδ᾽ ὑπεραλγῶ.

EURIPIDES—*Hippolytus*, 232–260.

4. Explain the construction of the following passages:—

(a.) ὅστις δελεάστιν μηδίαν, ἀλλ᾽ ἐν τῇ φύσει
τὸ σωφρονεῖν εἴληχεν εἰς τὰ πάνθ᾽ ὁμῶς.

Ibid., 79, 80.

(b.) οὐδ᾽ ἐπέτην γὰρ ἧς κατηρεφεῖς δόμοι
καλῶς ἀκούειν.

Ibid., 468, 469.

(c.) οὔτε γὰρ πυρὸς οὔτ᾽
ἄστρων ὑπέρτερον βέλος,
οἷον τὸ τᾶς Ἀφροδίτας
ἵησιν ἐκ χερῶν
Ἔρως ὁ Διὸς παῖς.

Ibid., 530–534.

(d.) ἐμοὶ μὲν οὖν
ἀξίωτος βίου τύχη πρὸς τὸ κραυθὲν τῆς τυχεῖν.

Ibid., 867, 868.

I. Translate.

εἰ τοίνυν τις ὑμῶν, ὦ ἄνδρες Ἀθηναῖοι, ἄλλως πως ἔχει τὴν ὀργὴν ἐπὶ Μειδίαν ἢ ὡς οἱ δὶον αὐτὸν τεθνάναι, οὐκ ὀρθῶς ἔχει. οὐ γὰρ ἔστι δίκαιον οὐδὲ προσῆκον οὔτε τὴν τοῦ παθόντος εὐλάβειαν τῷ μηδὲν ἐνατετολμηκότι πρὸς ἔλεον μερίδα εἰς σωτηρίαν ὑπάρχειν, τὸν δ᾽ εἰς ἅπαντας ὠμὸν καὶ βίαιον καὶ ἀσελγῆ γεγενημένον τούτῳ τῆς ὑπὲρ ὧν ἥμαρτεν ἀπολλύοιτ᾽ τὴν χρείαν, οὐδ᾽ ἐνὶ μὲν ἀεί, τῇ δὲ τοῦτον τὴν αὐτὴν ταύτην σπουδάζειν· τὸν γὰρ τοιοῦτον δεινὸν τῷ λόγῳ τὸ πρᾶγμ᾽ ἦν νῦν ἀίμ καὶ σῴζειν τοῖς. πολλοί γε καὶ δεῖ. ἀλλ᾽ ἔγωγε ἐκεῖνο θεωρῶ, ὦ, ὅ Βέλτιστον τῶν πολιτευομένων κατ᾽ ἐκεῖνον, τὸν νεανίαν, τῶν καθ᾽ αὐτὸν ἀγωνίζεσθαι (ἰσχυρὸς γὰρ ἦν, μέλας, ὁ κατ᾽ ἐν γεγεννηκὼς πᾶν ταύτας τὸ πράγματ᾽ εἰ μὴ δεῖ, τούτων ἵν Σάτυρ ἐν ἀνεστηκὼς τἀῖ καὶ διατριβὴ τοῦ ὑκεῖ ἴθξεῖ, ἵνι τούτων αὐτὸν εἴθξῃ διατριβὴν ὑβρίζειν τὸ σῶμ᾽, ἀναισχύντως ἄνω καὶ ἱκτενίσατι ὀνειδῆσαι. ἐκεῖνος μὲν οὖν ὁ παθὼν τοῦτ᾽ ὦ ἄνδρες Ἀθηναῖοι, ἅν δ᾽ τοιοῦτ᾽ ἐπ᾽ ἀγαθ... καὶ ἢ πληγὴ πνεύματος τὴν ὀργὴν τοῦ· ἀλλ᾽ ἡ ἀτιμία· οὐδ᾽ τὸ τύπτεσθαι τοῖς ἐλευθέροις ἐστὶ δεινὸν, ὦ κ τούτου δεινὸν, ἀλλὰ τὸ ἐφ᾽ ὕβρει. πολλὰ γὰρ ἄν ποιήσειεν ὁ τύπτων, ὦ ἄνδρες Ἀθηναῖοι, ὦν ὁ παθὼν ἔνι᾽ οὐδ᾽ ἀπαγγεῖλαι δύναιτ᾽ ἅν ἑτέρῳ, τῷ σχήματι, τῷ βλέμματι, τῇ φωνῇ, ὅταν ὡς ὑβρίζων, ὅταν ὡς ἐχθρὸς ὑπάρχων, ὅταν κονδύλοις, ὅταν ἐπὶ κόρρης. ταῦτα κινεῖ, ταῦτ᾽ ἐξίστησιν ἀνθρώπους αὐτῶν, ἀήθεις ὄντας τοῦ προπηλακίζεσθαι. οὐδεὶς ἅν, ὦ ἄνδρες Ἀθηναῖοι, ταῦτ᾽ ἀπαγγέλλων δύναιτο τῷ πάσχοντι καὶ τοῖς ὁρῶσιν ἐνάργη τὴν ὕβριν φανῆναι.

II. DEMOSTHENES—*De Falsa Legatione.*

νόσημα γὰρ, ὦ ἄνδρες Ἀθηναῖοι, δεινὸν ἐμπέπτωκεν εἰς τὴν Ἑλλάδα, καὶ χαλεπὸν καὶ πολλῆς τινος εὐτυχίας καὶ παρ' ὑμῶν ἐπιμελείας δεόμενον. οἱ γὰρ ἐν ταῖς πόλεσιν γνωριμώτατοι καὶ προεστάναι τῶν κοινῶν ἀξιούμενοι, τὴν αὑτῶν προλαβόντες ἐλευθερίαν οἱ δυστυχεῖς, αὐθαίρετον αὑτοῖς ἐπάγονται δουλείαν, Φιλίππῳ ξενίαν καὶ ἑταιρίαν καὶ φιλίαν καὶ τοιαῦτ' ὀνομάζοντες· οἱ δὲ λοιποὶ καὶ τὰ κύρι' ἅττα ποτ' ἐστὶν ἐν ἑκάστῃ τῶν πόλεων, οὓς ἔδει τούτους κολάζειν καὶ παραχρῆμα ἀποκτιννύναι, τοσοῦτον ἀπέχουσιν τοῦ τοιοῦτόν τι ποιεῖν ὥστε θαυμάζουσιν καὶ ζηλοῦσι καὶ βούλοιντ' ἂν οὐδεὶς ἑκαστος τοιοῦτος εἶναι. καίτοι τοῦτο τὸ πρᾶγμα καὶ τὰ τοιαῦτα ζηλώματα ὑπτονον μὲν, ὦ ἄνδρες Ἀθηναῖοι, μέχρι μὲν ὑμῖν ἢ πατρὶς τὴν ἡγεμονίαν καὶ τὸ κοινὸν ἀξίωμα ἀπολώλεκεν, νῦν δ' ἔξω καὶ τὴν ἐλευθερίαν παραμύθου· τὰς γὰρ ἀκροπόλεις αὐτῶν τῶν πόλεων γεγράφασιν καὶ τῶν αὑτῶν ἐσχηκότας τὴν Ἑλλάδα σφραγίδα τοκεύεσθαι, καὶ τοσαύτην μὲν τὴν παλαιτάτην λαίπας ἐδώ', ἣν' ἀλλήλαν ἀρχικὰ καὶ Φιλίππῳ χαριζόμενοι, συγγενεῖς αὑτῶν καὶ πολίτας μεμφόντι. καὶ οὐδ' ἱσταθ' ἱστησιν, ἀλλ' ὡς Ἀρκαδίαν εἰσελθὼν πάντ' ἄνω καὶ κάτω τὰ ἐκεῖ νενοίηκε, καὶ τὸν Ἀρκάδων πολλοὶ προσέχουσ αὐτοῖς ἐπ' ἐλευθερίᾳ μέγιστον φρονεῖν ὀμοίως ἔχον (μόνον γὰρ πάντων αὐτόχθονες ὑμεῖς ἐστε κἀκεῖνοι) Φιλίππου θαυμάζουσι καὶ χαλκοῦν ἱστᾶσι καὶ στεφανοῦσι, καὶ τὸ τελευταῖον, ἂν εἰς Πελοπόννησον ἴῃ, δέχεσθαι ταῖς πόλεσιν εἰσὶν ἐψηφισμένοι.

III. Write a short essay on the political condition of Greece at the accession of Philip to the throne of Macedon.

Translate into Greek:

1. They are too young to know what fathers they have lost.
2. I congratulate you on your disposition.
3. They asked the Thebans for money.
4. I did not know where to turn.
5. Athenians and allies, there is still room for hope. Before now men have escaped from greater dangers than these. You have not yourselves to blame for your reverses, or your present undeserved afflictions, so that our hopes for the future are encouraging, though our present sufferings disquiet us. When you look upon yourselves, and consider the great array that you are, you should not be dismayed. Remember that wherever you settle you at once make a city, for a city consists of living men and not merely of brick and stone.
6. Render into Iambic trimeter the following :—

> For thee, O Queen, I decked with care, and bring
> This woven garland from a virgin mead,
> Where neither shepherd dares to feed his flocks,
> Nor ever scythe has swept, but through the mead
> Unshorn the bee in spring-time wings her way.

LATIN.

Examiner—Professor LEWIS.

Translate :—

CICERO—*Tusculan Disputations,* iii., 8.

Veri etiam simile illud est, qui sit temperans, quem Graeci σώφρονα appellant eamque virtutem σωφροσύνην vocant, quam ego equidem tum temperantiam, tum moderationem appellare, non numquam etiam modestiam, sed haud scio an recte ea virtus frugalitatis appellari possit, quod angustius apud Graecos valet, qui frugi homines χρησίμους appellant, id est, tantum modo utiles : at illud est latius : omnis enim abstinentia,

Appendix D.

Sectional Examinations.

omnis innocentia—quae apud Graecos usitatum nomen nullum habet, sed habere potest ἀδιάβλητος: nam est innocentia adfectio talis animi, quae noceat nemini—reliquas etiam virtutes frugalitas continet. Quae nisi tanta esset et si in angustiis, quibus plerique putant, teneretur, nunquam esset L. Pisonis cognomen tanto opere laudatum. Sed quia nec qui propter metum praesidium reliquit, quod est ignaviae, nec qui propter avaritiam clam depositum non reddidit, quod est iniustitiae, nec qui propter temeritatem male rem gessit, quod est stultitiae, frugi appellari solet, eo tris virtutes, fortitudinem, iustitiam, prudentiam, frugalitas complexa est—etsi hoc quidem commune est virtutum : omnes enim inter se nexae et iugatae sunt :—reliqua igitur est, quarta virtus ut sit, ipsa frugalitas.

Terence—*Phormio*, Act I., sc. iv., 26.

An. Non sum apud me. *Ge.* Atqui opus est nunc quom maxume ut sis, Antipho :
Nam si senserit te timidum pater esse, arbitrabitur
Commeruisse culpam. *Ph.* Hoc uerumst. *An.* Non possum immutarier.
Ge. Quid faceres, si aliud quid grauius tibi nunc faciundum foret ?
An. Quom hoc non possum, illud minus possum. *Ge.* Hoc nil est, Phaedria : ilicet.
Quid hic conterimus operam frustra ? quin abeo ? *Ph.* Et quidem ego ?
An. Obsecro,
Quid si adsimulo, satin est ? *Ge.* Garris. *An.* Voltum contemplamini : em,
Satine sic est ? *Ge.* Non. *An.* Quid si sic ? *Ge.* Propemodum. *An.* Quid sic ? *Ge.* Sat est :
Em, istuc serua : et uerbum uerbo, par pari ut respondeas,
Ne te iratus suis saeuidicis dictis protelet. *An.* Scio.
Ge. Vi coactum te esse inuitum, lege, iudicio : tenes ?
An. Teneo. *Ge.* Cedo ut melius dicas, quem nihil ames, quem oderis.
Sed quis hic est senex, quem uideo in ultima platea ? *An.* Ipsus est.
Non possum adesse. *Ge.* Ah quid agis ? quo abis, Antipho ?
Mane, mane inquam. *An.* Ego me noui et peccatum meum :
Vobis commendo Phanium et uitam meam.

1. How did the ancient artists represent *Aesculapius* ?
2. Give an account of the life and opinions of Anaxagoras.
3. Quote some of the verses in the third book of the Tusculan Disputations, and explain the metre.
4. Write the life of Terence. From what sources do we derive our information on this subject ?
5. Explain the derivation of *plistrisum*, *platea*, *pauxillulum*, *Epidicazomenos*, *iustigo*, and *studuisse*.
6. Show that many Latin words were contracted in pronunciation, and confirm your statements by references to modern languages.

Translate into Latin :—

The more difficult it is to acquire a knowledge of heavenly things, the more do they kindle in us the desire of knowing them.

It is one thing to be unanimously acquitted, another to escape by a sentence purchased by bribery.

Do you then believe that the mind is strengthened by pleasure and weakened by continued toil ?

Arms must be resisted by arms.

Is it true that one poet always envies another ?

F

I by Hercules had rather be condemned than acquitted by a sentence purchased by bribery.

Translate into Latin sapphics :—

Suns set and return, the moon wanes and repairs its form by a fixed law, the stars which the rising sun put to flight with his light,
Night brings back. The colds of severe winter kill with no frost, when the herbs and various flowers, as many as the loosened earth pours forth from her bosom.

The milder Zephyrus breathing will call all things into flower: Zephyrus calling, the renewed grace of the beautiful spring will clothe the fields.

Translate into Latin elegiacs :—

At summer eve, when Heaven's ethereal bow
Spans with bright arch the glittering hills,
Why to yon mountains turns the musing eye,
Whose sunbright summit mingles with the sky ?
Why do those cliffs of shadowy tint appear
More sweet than all the landscape smiling near ?
'Tis distance lends enchantment to the view,
And robes the mountain in its azure hue.

Translate into Latin prose :—

But among all the different ways of giving counsel I think the finest, and that which pleases the most universally, is fable, in whatsoever shape it appears. If we consider this way of instructing or giving advice, it excels all others, because it is the least shocking, and the least subject to those exceptions which I have before mentioned.

This will appear to us, if we reflect in the first place, that upon the reading of a fable we are made to believe we advise ourselves. We peruse the author for the sake of the story, and consider the precepts rather as our own conclusions than his instructions. The moral insinuates itself imperceptibly, we are taught by surprise, and become wiser and better unawares.

MATHEMATICS.

Examiner, Professor NIVEN.

1. Investigate an expression for the surface of a sphere in terms of its radius.

2. Given the sides of a spherical triangle, find expressions to determine its angles.

3. A pyramid stands on a square base and has for its faces isosceles triangles of given form, determine the inclinations of its faces.

4. State Napier's rules for solving right-angled spherical triangles, and prove directly from the figure that $\cos c = \cos a \cdot \cos b$.

If A' be the pole of the side BC of a triangle ABC, prove that $\cot AA' = \cot b \div \sin C$.

4. Prove, in any way, that $2 \cos x = e^{x\sqrt{-1}} + e^{-x\sqrt{-1}}$.

Find the real part of the expression $\cos\left(\dfrac{\pi}{3} + \sqrt{-1}\right)$.

5. What are the co-ordinates of a point ? Investigate what is represented geometrically by an equation of the form $y = mx + c$.

Construct the loci of the equations :—

$$2x - y + 3 = 0,$$

$$2x + c \left(\theta + \dfrac{\pi}{2} \right),$$

$$(x - y)^2 + (x + y + 1)^2 = 0.$$

6. Find the condition that two straight lines be at right angles.

Prove that the lines joining the points (– 3, 0) (– 2, +1) and (– 1, 6) (1, 4) are at right angles, and find the area of the quadrilateral of which they are the angular points.

7. How would you determine the equation of the line joining two points, each of which is given by the intersection of two right lines?

ABCD is a quadrilateral, and AB, CD intersect in E, AC, BD in F, and AD, BC in O ; prove that if EF cuts BC, AD in H, K, then OBHC, OAKD are harmonic ranges.

8. Define a parabola and find its equation.

Prove that the area of the triangle joining three points on a parabola whose ordinates are y_1 y_2 y_3 is

$$\frac{(y_1 - y_2) (y_2 - y_3) (y_3 - y_1)}{8 a}$$

9. Prove that the equation

$$2x^2 - 3y^2 - 3xy + x + 3y = 0$$

represents a hyperbola, and find its asymptotes.

10. Define a differential coefficient, and prove *directly from the definition* that

$$\frac{d \log x}{dx} = \frac{1}{x}.$$

Differentiate these :—

$$\frac{(x - 1) (x - 2)}{x - 3}, \quad \log_a \sqrt{\frac{1 - 2 \cos x}{1 + 2 \cos x}}, \quad x^{\tan^{-1} x}.$$

11. Investigate the conditions for the maxima and minima values of a function of one independent variable.

A given quantity of material is used in constructing a pyramid of the kind mentioned in question 2 ; how must it be made to have the least possible surface?

Find the value of

$$\frac{x - \tan^{-1} x}{x - \sin^{-1} x} \text{ when } x = 0.$$

12. Given $\phi(x, y) = 0$, find $\dfrac{dy}{dx}$.

If $x = f(y, z)$, $y = \phi(x, z)$, find the values of $\dfrac{dy}{dx}$, $\dfrac{d^2 y}{dx^2}$.

13. State and prove the property of the evolute of a curve which gives rise to the name.

Prove that the radius of curvature of a cycloid is double the normal.

14. Integrate the expressions :—

$$\frac{1}{(\sin x)^9}, \quad \frac{x + a}{x^2 + ax + a}, \quad \frac{1}{x^2 - 1}, \quad \frac{1}{(a^2 \cos^2 x + b^2 \sin^2 x)^2}.$$

Find the volume generated by the revolution of the lemniscate $r^2 = a^2 \cos 2\theta$ round its axis.

NATURAL PHILOSOPHY.

Examiner, Professor ENGLAND.

1. Three forces, P, Q, R, of 10, 15, 10 lbs. respectively, act at a point; Q makes an angle of 60° with P, and R an angle of 60° with Q; find their resultant.

2. Two parallel forces, one of 8, the other of 12 lbs., act at distances of 4 feet and 6 feet respectively to the right of a certain point in their plane, another of 18 lbs. at 2 feet to the left of the same point and in the opposite direction; find the position and magnitude of their resultant.

3. In the ordinary balance of equal weights prove that the sensibility depends on the length of the arm, the weight of the instrument, and the position of its centre of gravity.

4. Two weights of 6 ozs. and 4 ozs. respectively, are attached to the extremities of a fine chord passing over a pulley; calculate the acceleration and find the distance passed over in 2 seconds.

5. A weight of 3lbs. is attached to one end of a cord 5 feet in length, which can just bear a strain of 5 lbs.; find the greatest velocity with which it may be made describe a circle in a vertical plane in which the other end of the cord is fixed.

6. Explain the principle on which the ordinary barometer can be used for measuring the height of a mountain.

7. What weight of a metal, whose specific gravity is 7, must be attached to ½ oz. of a body whose specific gravity is ·45 in order that the compound body should just sink in water?

8. The object glass of a telescope is 3 feet focal length, and the eye-piece 1 inch; calculate its magnifying power.

9. What is meant by the equation of time? How is it caused?

10. By what observations can the latitude and longitude of a place be determined?

11. Investigate the deviation which a ray of light undergoes in passing through a prism with a small angle.

12. What must be the sun's declination when twilight lasts all night in a given latitude?

PRIZE QUESTIONS.

1. Investigate the general conditions of a system of forces acting in the same plane.

2. One end of a heavy beam rests on a smooth horizontal plane, the other on a smooth inclined plane; find the horizontal force necessary to prevent its slipping.

3. In the above case, if the planes were rough, what should be the co-efficient of friction when the beam would be on the point of moving?

4. Investigate the formula for the time of oscillation of a simple pendulum.

5. Show that if the planets moved in circular orbits round the sun, Kepler's third law is a consequence of the law of gravity.

6. Knowing the latitude of a place, and the sun's declination, show how to find the time of sunrise.

THIRD YEAR.

ENGLISH LITERATURE.

Examiner, Professor ARMSTRONG.

1. Name the principal English poets that flourished from the death of Chaucer to the accession of Elizabeth.

Appendix D. *Sessional Examinations.*

2. State the various theories of the origin of the Modern Drama, and describe the course of its development in England up to the death of Marlowe.

3. Analyze Shakspere's character of Henry V. or King John.

4. Give an account of Milton's life and writings, and contrast Milton's genius with that of Shakspere.

5. Name the characters that take part in the "Great Consuls," and give an abstract of the speeches put by Milton in the mouth of each of them.

6. Give an abstract of Pope's reasoning in the *Essay on Man.*

7. Give a brief account of Dr. Johnson and his works.

8. Sketch the life of Burke to the date of the publication of *Thoughts on the Present Discontents.*

9. Account for the various peculiarities of style and thought which distinguish Cowper's works from those of his immediate predecessors.

10. Name the principal poets of the Lake School and of the Romantic School.—Explain the characteristics of each school.

11. Indicate those portions of *Childe Harold* which bear the strongest marks of Shelley's influence.

12. Annotate the following passages:—

   (a.) "I was not for fiction chose Rousseau this spot,
         Peopling it with affections ;"—

   (b.) "Lausanne ! and Ferney ! ye have been the abodes
         Of names which men bequeathed a name"—

   (c.) "Before St. Mark still glows his steeds of brass,
         Their gilded collars glittering in the sun ;
         But is not Doria's menace come to pass ?"

   (d.) "Ungrateful Florence ?"

MODERN HISTORY.

Examiner, Professor ARMSTRONG.

1. Give an account of the Millenary Petition and the Hampton Court Conference.

2. Describe the war in the Palatinate.

3. Explain Strafford's Irish policy.

4. Name in their order the engagements which took place between the Royal and Parliamentary forces during the Civil Wars.

5. Describe the various retrogressive measures of Parliament during the reign of Charles II.

6. Give an account of the Treaty of Dover.

7. Describe the successive acts by which James II. hastened his overthrow ; and explain the constitution of the Court of Ecclesiastical Commission.

8. Give the substance of the Declaration of Right and of the Bill of Rights.

9. Describe the course of events in Ireland from the accession of William and Mary to the Treaty of Limerick.

10. Give an account of the Scottish Act of Security.

11. Enumerate in their order the victories of Marlborough.

12. Describe the relations of Parliament to the King and the Nation respectively at the accession of George III., and give a brief summary of Burke's account of the Double Cabinet and its results.

CHEMISTRY.

Examiner, Professor MAXWELL SIMPSON.

PASS EXAMINATION.

N.B.—This Paper was common to Students in Arts of the Third Year, and to First Year's Students in Engineering and Medicine.

1. What weight of chlorate of potash will furnish 100 grammes of oxygen gas on the application of heat?

2. How are chlorine gas and iodine prepared? Explain the reactions by equations.

3. Describe and explain the action of chlorine upon—(a), a lighted taper; (b), powdered antimony; (c), solution of sulphate of indigo; (d), solution of ammonia.

4. Describe and explain the action of Iodine upon—(a), solution of sulphide of hydrogen; (b), phosphorus and water; (c), solution of starch.

5. Give two processes for the preparation of common tribasic phosphoric acid. Explain the reactions by equations.

6. Explain the action of nitrate of silver upon solutions of this acid (phosphoric), arsenious, and arsenic acids respectively. How would you distinguish the two first?

7. What is the composition of atmospheric air by volume? How would you prove that the gases are simply mixed, and not chemically combined?

8. What is meant by the term atomicity or equivalency as applied to an element? Give examples of monads, dyads, triads, tetrads, and pentads.

9. Write the graphic formulæ of the following compounds:—Carbonic dioxide, nitric and sulphuric acids, nitrate of barytes, alcohol, glycol.

10. Explain in detail what takes place when a plate of metallic copper is left for some time in a solution of corrosive sublimate.

11. Give a process for the preparation of iodide of potassium. Explain the reactions by equations; and state how iodine may be detected in it; and, if present, chlorine and iodic acid.

12. How is caustic potash prepared? Explain by equations its action upon corrosive sublimate, calomel, and ferric chloride, respectively.

13. How are pure metallic gold and platinum obtained from the crude metals?

14. Describe and explain the action of sulphide of hydrogen upon acid solutions of arsenious acid, salts of cadmium, and tin (stannic salt), respectively. How would you distinguish the precipitates formed?

15. Write the formulæ of marsh gas, olefiant gas, and acetylene. Explain also the action of chlorine or bromine upon each of these gases.

16. Describe and explain the continuous process for the preparation of ether. Write its constitutional formula; and explain how Williamson succeeded in forming mixed ethers.

17. How are iodide and cyanide of ethyl prepared? Explain by equations the action of hydrates of potash upon each.

18. Name and write the constitutional formulæ of the acids that may be obtained from alcohol and glycol respectively by the action of oxidizing agents. Give also their atomicity and basicity.

NATURAL HISTORY.

Examiner, Professor RRAY GREENE.

N.B.—The following Papers were common to third year's students in Arts, and first year's students in Medicine.

BOTANY.

1, 2. Describe the chief modifications which the perianth undergoes among the British Ranunculaceæ.

3. What monopetalous plants have free-central placentation?

4. Wherein does the flower of a typical grass differ from that of other hypogynous monocotyledons?

5. How do you understand the terms—'acaulescent' and 'leafless,' as applied to certain flowering plants in works on systematic botany?

ZOOLOGY.

6. Contrast the Leporidæ with other rodents.

7. In what birds is the keel of the sternum (*a*) absent or (*b*) rudimentary?

8. Describe the median and paired fins of the flat-fishes (Pleuronectæ).

9. Give an account of the respiratory apparatus of the snail, so far as to note accurately its structure and condition.

10. Compare the esophageal nervous ring of the arthropods with that of the echinoderms.

GEOLOGY AND MINERALOGY.

Examiner, Professor HARKNESS.

N.B.—The following Paper was common to third year's students in Arts, and first year's students in Engineering.

1. How are Igneous distinguished from Aqueous Rocks?

2. Explain the meaning of the terms "Dip" and "Strike."

3. What is the nature of Cleavage?

4. Describe the Cambrian Rocks of South Wales.

5. What is the position of the Wenlock Shales? Name some of their characteristic fossils.

6. Indicate the lowest member of the Carboniferous formation of the South of Ireland. Mention some of the fossils which it affords.

7. What deposits in the British Isles yield Rock Salt?

8. Under what forms is the Liassic formation exhibited in Ireland?

9. What is the nature of the "Gault?" What is its geological horizon?

10. To what portion of the Cainozoic series are the Bagshot Sands referable?

11. Point out the position of the Strata of the Siwalik Hills. Indicate also their nature.

12. Describe the several forms of moraines resulting from glacial action.

13. What system of crystals does *Oligoclase* belong? What is its chemical composition?

14. What are the characters, and what is the composition of *Iron pyrites?*

SCHOLARSHIP EXAMINATIONS.

LITERARY SCHOLARSHIPS—FIRST YEAR.

GREEK.

Examiner, Professor BOULGER.

Translate :—

HOMER—Iliad, Book V., 899–906.

ὣς φάτο, τὸν δ' Παιήον' ἀνώγειν ἰήσασθαι.
τῷ δ' ἐπὶ Παιήων ὀδυνήφατα φάρμακα πάσσων
ἠκέσατ'· οὐ μὲν γάρ τι καταθνητός γ' ἐτέτυκτο.
ὡς δ' ὅτ' ὀπὸς γάλα λευκὸν ἐπειγόμενος συνέπηξεν
ὑγρὸν ἐόν, μάλα δ' ὦκα περιτρέφεται κυκόωντι,
ὣς ἄρα καρπαλίμως ἰήσατο θοῦρον Ἄρηα.
τὸν δ' Ἥβη λοῦσεν, χαρίεντα δὲ εἵματα ἕσσεν·
πὰρ δὲ Διὶ Κρονίωνι καθέζετο κύδεϊ γαίων.

HERODOTUS, Book II., Chap. 121.

ὣς δὲ ἡμέρῃ ἐγένετο, ἐσελθόντα τὸν βασιλέα ὡς ἐξεπλάγη ἱδρόντα τὸ σῶμα τοῦ φωρὸς ἐν τῇ πάγῃ ἄνευ τῆς κεφαλῆς ἐὸν, τὸ δὲ οἴκημα ἀσινέα καὶ οὔτε ἔσοδον οὔτε ἔκδυσιν οὐδεμίαν ἔχον. ἀπορεύμενον δὲ μιν τάδε ποιῆσαι· τοῦ φωρὸς τὸν νέκυν κατὰ τοῦ τείχεος κατακρεμάσαι, φυλάκους δὲ αὐτοῦ καταστήσαντα ἐντείλασθαί σφι, τὸν ἂν ἴδωνται ἀποκλαύσαντά ἢ κατοικτισάμενον, συλλαβόντας ἄγειν πρὸς ἑωυτόν. ἀνακρεμαμένου δὲ τοῦ νέκυος τὴν μητέρα δεινῶς φέρειν, λόγους δὲ πρὸς τὸν περιεόντα παῖδα ποιευμένην προστάσσειν αὐτῷ, ὅτεῳ τρόπῳ δύναται, μηχανᾶσθαι ὅκως τὸ σῶμα τοῦ ἀδελφεοῦ καταλύσας κομιεῖ· εἰ δὲ τούτων ἀμελήσει, διαπειλεῖν αὐτὴν ὡς ἐλθοῦσα πρὸς τὸν βασιλέα μηνύσει αὐτὸν ἔχοντα τὰ χρήματα.

EURIPIDES—Hecuba, 905–931.

σὺ μὲν ὦ πατρὶς Ἰλιάς,	στρ.
τῶν ἀπορθήτων πόλις οὐκέτι λέξει·	
τοῖον Ἑλλάνων νέφος ἀμφὶ σε κρύπτει	
δορὶ δὴ δορὶ πέρσαν.	
ἀπὸ δὲ στεφάναν κέκαρσαι	
πύργων, κατὰ δ' αἰθάλου κηλῖδ' οἰκτροτάταν κέχρωσαι,	
τάλαιν', οὐκέτι σ' ἐμβατεύσω.	
μεσονύκτιος ὠλλύμαν,	ἀντ.
ἦμος ἐκ δείπνων ὕπνος ἡδὺς ἐπ' ὄσσοις	
κίδναται, μολπᾶν δ' ἄπο καὶ χοροποιῶν	
θυσιᾶν καταπαύσας	
πόσις ἐν θαλάμοις ἔκειτο,	
ξυστὸν δ' ἐπὶ πασσάλῳ,	
ναύταν οὐκέθ' ὁρῶν ὅμιλον	
Τροίαν Ἰλιάδ' ἐμβεβῶτα.	
ἐγὼ δὲ πλοκάμους ἀναδέτοις	
μίτραισιν ἐρρυθμιζόμαν	

χρυσῶν ἐνέρχων
λεύσσουσ' ἀτίρμουσα εἰς αὐγάς,
ἐπιδέμιον ὡς πέονμ' ἐς εὐνάν.
ἀνὰ δὲ κέλαδος ἧκλὸε πόλιν
κελεύενμα δ' ἦν καθ' ἄστυ Τροίας τοῦ· ὦ
παῖδες Ἑλλάνων, πότε δὴ πότε τὰν
Ἰλιάδα σκοπιὰν
πέρσαντε ἥξετ' οἴκους;

ΧΕΝΟΦΩΝ—Ἀνάβασις, I., ix., 1-5.

Κῦρος μὲν δὴ οὕτω ἐτελεύτησεν, ἀνὴρ ὢν Περσῶν τῶν μετὰ Κῦρον τὸν ἀρχαῖον γενομένων βασιλικώτατός τε καὶ ἄρχειν ἀξιώτατος, ὡς παρὰ πάντων ὁμολογεῖται τῶν Κύρου δοκούντων ἐν πείρᾳ γενέσθαι. πρῶτον μὲν γὰρ ἔτι παῖς ὢν ὅτ' ἐπαιδεύετο καὶ σὺν τῷ ἀδελφῷ καὶ σὺν τοῖς ἄλλοις παισί, πάντων πάντα κράτιστος ἐνομίζετο. πάντες γὰρ οἱ τῶν ἀρίστων Περσῶν παῖδες ἐπὶ ταῖς βασιλέως θύραις παιδεύονται· ἔνθα πολλὴν μὲν σωφροσύνην καταμάθοι ἄν τις, αἰσχρὸν δ' οὐδὲν οὔτ' ἀκοῦσαι οὔτ' ἰδεῖν ἔστι. θεῶνται δ' οἱ παῖδες καὶ τιμωμένους ὑπὸ τοῦ βασιλέως καὶ ἀκούουσι, καὶ ἄλλους ἀτιμαζομένους· ὥστε εὐθὺς παῖδες ὄντες μανθάνουσιν ἄρχειν τε καὶ ἄρχεσθαι. ἔνθα Κῦρος αἰδημονέστατος μὲν πρῶτον τῶν ἡλικιωτῶν ἐδόκει εἶναι, τοῖς τε πρεσβυτέροις καὶ τῶν ἑαυτοῦ ὑποδεεστέρων μᾶλλον πείθεσθαι, ἔπειτα δὲ φιλιππότατος καὶ τοῖς ἵπποις ἄριστα χρῆσθαι· ἔκρινον δ' αὐτὸν καὶ τῶν εἰς τὸν πόλεμον ἔργων, τοξικῆς τε καὶ ἀκοντίσεως, φιλομαθέστατον εἶναι καὶ μελετηρότατον.

Translate into Greek:—

1. If you associate with the bad you will become bad yourself.
2. It is not right for one who suffers wrong to avenge himself by doing wrong in return.
3. I love such a man as you.
4. He was nearly seventy years old when he died.
5. The flatterer is a person who will say as he walks along with another 'Do you observe how people are looking at you?' Then he will request the company to be silent when the great man is speaking, and will praise him in his hearing.

LATIN.

Examiner, Professor LEWIS.

1. Mention some cases where the use of the relative pronoun in Latin differs from the English idiom.
2. Give the rules for the pentameter verse, and state the principal exceptions.
3. Relate the war with Jugurtha.
4. Trace the course of the following rivers:—Padus, Tiberis, Liger, Rhodanus, and Bastis.
5. What are the perfects and supines of *sedeo*, *tondeo*, *findo*, *fingo*, *plecto*, and *vivo*?

Re-translate into Latin:—

This most sacred voice of my country, and to all those who blame me after the same manner, I shall make this short answer, that if I had

thought it most advisable to put Catiline to death, I would not have allowed that gladiator the use of one moment's life: for if, in former days, our most illustrious citizens, instead of sullying, have done honour to their memories, by the destruction of Saturninus, the Gracchi, Flaccus, and many others; there is no ground to fear, that by killing this parricide any envy would lie upon me with posterity.

ENGLISH LANGUAGE.

Examiner, PROFESSOR ARMSTRONG.

COMPOSITION.

Write an essay on *The Advantages of a Knowledge of Ancient History.*

HISTORY AND GRAMMAR OF THE LANGUAGE.

1. Describe, account for, and illustrate by examples, the decay of the inflectional system of Anglo-Saxon.

2. Define the several periods into which Dr. Craik divides the history of the English language.

3. Describe the characteristics of the language of the Fourth Period.

4. Give the substance of Dr. Craik's account (after Mr. Guest) of the local origin of standard English.

5. Give a brief account of the Romance tongues, and their origin and localization.

6. Discuss the question, whether a grammatical knowledge of Greek and Latin is essential to a thorough understanding and correct use of modern English.

7. Give a brief account of the derivation of English parts of speech.

8. Give the rules for the placing of the adverb in English sentences, and illustrate them by examples.

ANCIENT HISTORY AND ANCIENT AND MODERN GEOGRAPHY.

HISTORY OF GREECE AND ROME.

1. Give the substance of the legends of the Greeks respecting their origin.

2. Relate the story of the Seven against Thebes.

3. Compare together the distinctive features of the early political systems of Sparta and Athens.

4. Sketch briefly the progress of the literature of the Greeks to the close of the Persian Wars.

5. Describe the principal events of the First and Second Macedonian Wars.

6. Give a brief account of the civil history of Rome during the Macedonian and Syrian Wars.

7. Give a brief account of the First Slave War in Sicily.

8. Describe the origin and events of the Second Slave War.

ANCIENT AND MODERN GEOGRAPHY.

1. Give the ancient and modern names of the principal rivers of France.

2. Give the names of the principal Greek colony-towns of Italy, Sicily, and Gaul; and describe their situation.

3. Describe the situation and surroundings of Athens, Sparta, Carthage, and Rome.

4. Give a geographical account of the Turkish Empire, and describe the relative positions of Montenegro, Bulgaria, and Servia. *Appendix D.*

5. Give the names of the States of the American Union, and the names of their chief cities. *Scholarship Examination.*

6. Name the principal mountain-ranges of India, and give a brief account of the British Indian Empire.

LITERARY SCHOLARSHIPS—SECOND AND THIRD YEARS.

GREEK.

Examiner, Professor BOULGER.

Translate:—

HERODOTUS, I, 85.

κατ' αὐτὸν δὲ Κροῖσον τάδε ἐγίνετο. ἦν οἱ παῖς, τοῦ καὶ πρότερον ἐπεμνήσθην, τὰ μὲν ἄλλα ἐπιεικής, ἄφωνος δέ. ἐν τῇ ὧν παρελθούσῃ εὐεστοῖ ὁ Κροῖσος τό τε πᾶν ἐς αὐτὸν ἐπεποιήκεε ἄλλα τε ἐπιφραζόμενος καὶ δὴ καὶ ἐς Δελφοὺς περὶ αὐτοῦ ἀπεπέμψε χρησομένους. ἡ δὲ Πυθίη οἱ εἶπε τάδε.

Λυδὲ γένος, πολλῶν βασιλεῦ, μέγα νήπιε Κροῖσε,
μὴ βούλευ πολύευκτον ἰὴν ἀνὰ δώματ' ἀκούειν
παιδὸς φθεγγομένου. τὸ δέ σοι πολὺ λώϊον ἀμφὶς
ἔμμεναι· αὐδήσει γὰρ ἐν ἤματι πρῶτον ἀνόλβῳ.

ἁλισκομένου δὲ τοῦ τείχεος, ἦε γὰρ τῶν τις Περσέων ἀλλογνώσας Κροῖσον ὡς ἀποκτενέων, Κροῖσος μέν νυν ὁρέων ἐπιόντα ὑπὸ τῆς παρεούσης συμφορῆς παρημελήκεε, οὐδέ τί οἱ διέφερε πληγέντι ἀποθανεῖν· ὁ δὲ παῖς οὗτος ὁ ἄφωνος ὡς εἶδε ἐπιόντα τὸν Πέρσην, ὑπὸ δέους τε καὶ κακοῦ ἔρρηξε φωνήν, εἶπε δέ "Ὤνθρωπε, μὴ κτεῖνε Κροῖσον." οὗτος μὲν δὴ τοῦτο πρῶτον ἐφθέγξατο, μετὰ δὲ τοῦτο ἤδη ἐφώνεε τὸν πάντα χρόνον τῆς ζόης.

HERODOTUS, I, 200.

νόμοι μὲν δὴ τοῖσι Βαβυλωνίοισι οὗτοι κατεστᾶσι, εἰσὶ δὲ αὐτῶν πατριαὶ τρεῖς, αἳ οὐδὲν ἄλλο σιτέονται εἰ μὴ ἰχθῦς μοῦνον, τοὺς ἐπεί τε ἂν θηρεύσαντες αὐήνωσι πρὸς ἥλιον, ποιεῦσι τάδε· ἐσβάλλουσι ἐς ὅλμον καὶ λεήναντες ὑπέροισι σῶσι διὰ σινδόνος· καὶ ὃς μὲν ἂν βούληται αὐτῶν, ἅτε μᾶζαν μαξάμενος ἔχει, ὁ δὲ ἄρτου τρόπον ὀπτήσας.

SOPHOCLES—*Oedipus Rex,* 473-482.

ἔλαμψε γὰρ τοῦ νιφόεντος ἀρτίως φανεῖσα
φάμα Παρνασοῦ τὸν ἄδηλον ἄνδρ' πάντ' ἰχνεύειν.
φοιτᾷ γὰρ ὑπ' ἀγρίαν
ὕλαν ἀνά τ' ἄντρα καὶ
πέτρας ὅτε ταῦρος,
μέλεος μελέῳ ποδὶ χηρεύων,
τὰ μεσόμφαλα γᾶς ἀπονοσφίζων
μαντεῖα· τὰ δ' ἀεὶ
ζῶντα περιποτᾶται.

PLATO—*Phaedon,* 58.

τὴν μέντοι ἰδέαν τῆς γῆς, οἵαν πέπεισμαι εἶναι, καὶ τοὺς τόπους αὐτῆς οὐδέν με κωλύει λέγειν. ἀλλ', ἔφη ὁ Σιμμίας, καὶ ταῦτα ἀρκεῖ. πεπεισμαι τοίνυν, ἦ δ' ὅς, ἐγὼ ὡς πρῶτον μέν, εἰ ἔστιν ἐν μέσῳ τῷ οὐρανῷ περιφερὴς

οὖσα, μηδὲ αὐτῇ δεῖν μήτε ἀέρος πρὸς τὸ μὴ πεσεῖν μήτε ἄλλης ἀνάγκης
μηδεμιᾶς τοιαύτης, ἀλλὰ ἱκανὴν εἶναι αὐτὴν ἴσχειν τὴν ὁμοιότητα τοῦ
οὐρανοῦ αὐτοῦ ἑαυτῷ πάντῃ καὶ τῆς γῆς αὐτῆς τὴν ἰσορροπίαν· ἰσόρροπον
γὰρ πρᾶγμα ὁμοίου τινὸς ἐν μέσῳ τεθὲν οὐχ ἕξει μᾶλλον οὐδ᾽ ἧττον οὐδαμόσε
κλιθῆναι, ὁμοίως δ᾽ ἔχον ἀκλινὲς μενεῖ. πρῶτον μὲν, ἢ δ᾽ ὅς, τοῦτο
πέπεισμαι, εἰ ὀρθῶς λέγῃ, ἢ ὀρθῶς, ἔφη ὁ Σιμμίας. ἔτι τοίνυν, ἦ δ᾽ ὃς, πάμμεγά τι εἶναι
αὐτό, καὶ ἡμᾶς οἰκεῖν τοὺς μέχρι Ἡρακλείων στηλῶν ἀπὸ Φάσιδος ἐν σμικρῷ
τινι μορίῳ, ὥσπερ περὶ τέλμα μύρμηκας ἢ βατράχους περὶ τὴν θάλατταν
οἰκοῦντας, καὶ ἄλλους πολλοὺς ἐν πολλοῖσι τοιούτοις τόποις οἰκεῖν.
εἶναι γὰρ πανταχῇ περὶ τὴν γῆν πολλὰ κοῖλα καὶ παντοδαπὰ καὶ τὰς ἰδέας
καὶ τὰ μεγέθη, εἰς ἃ ξυνερρυηκέναι τό τε ὕδωρ καὶ τὴν ὁμίχλην καὶ τὸν ἀέρα·
αὐτὴν δὲ τὴν γῆν καθαρὰν ἐν καθαρῷ κεῖσθαι τῷ οὐρανῷ, ἐν ᾧπερ ἐστὶ τὰ
ἄστρα, ὃν δὴ αἰθέρα ὀνομάζειν τοὺς πολλοὺς τῶν περὶ τὰ τοιαῦτα εἰωθότων
λέγειν· οὗ δὴ ὑποστάθμην ταῦτα εἶναι καὶ ξυρρεῖν ἀεὶ εἰς τὰ κοῖλα τῆς γῆς.
ἡμᾶς οὖν οἰκοῦντας ἐν τοῖς κοίλοις αὐτῆς λεληθέναι καὶ οἴεσθαι ἄνω ἐπὶ τῆς
γῆς οἰκεῖν, ὥσπερ ἂν εἴ τις ἐν μέσῳ τῷ πυθμένι τοῦ πελάγους οἰκῶν οἴοιτό
τε ἐπὶ τῆς θαλάττης οἰκεῖν καὶ διὰ τοῦ ὕδατος ὁρῶν τὸν ἥλιον καὶ τὰ ἄλλα
ἄστρα τὴν θάλατταν ἡγοῖτο οὐρανὸν εἶναι, διὰ δὲ βραδυτῆτά τε καὶ ἀσθένειαν
μηδεπώποτε ἐπὶ τὰ ἄκρα τῆς θαλάττης ἀφιγμένος μηδὲ ἑωρακὼς εἴη, ἐκδὺς
καὶ ἀνακύψας ἐκ τῆς θαλάττης εἰς τὸν ἐνθάδε τόπον, ὅσῳ καθαρώτερος καὶ
καλλίων τυγχάνει ἂν τοῦ παρὰ σφίσι, μηδὲ ἄλλου ἀκηκοὼς εἴη τοῦ ἑωρακότος.

Translate into Greek :—

The Greeks were in the midst of a hostile country, ten thousand stadia
from home, surrounded by enemies, blocked up by impassable mountains
and rivers, without guides, without provisions, without cavalry to aid
their retreat, without generals to give orders. A stupor of sorrow and
conscious helplessness seized upon all ; few came to the evening muster ;
few lighted fires to cook their suppers : every man lay down to rest
where he was ; yet no man could sleep, for fear, anguish, and yearning
after relatives whom he was never again to behold.

LATIN.

Examiner, Professor LEWIS.

Translate :—

JUVENAL, X., 118-132.

Eloquio sed uterque perit orator ; utrumque
Largus et exundans leto dedit ingenii fons.
Ingenio manus est et cervix caesa ; nec unquam
Sanguine causidici maduerunt rostra pusilli.
O fortunatam natam me consule Romam—
Antoni gladios potuit contemnere, si sic
Omnia dixisset.   Ridenda poemata mala,
Quam te conspicuae, divina Philippica, famae,
Volveris a prima quae proxima.   Saevus et illum
Exitus eripuit, quem mirabantur Athenae
Torrentem et pleni moderantem frena theatri.
Dis ille adversis genitus miseroque parente,
Quem pater ardentis massae fuligine lippus
A carbone et forcipibus gladioque parante
Incude et luteo Vulcano ad rhetora misit.

Translate into Latin Elegiacs :—

>   Yes ! let the fиcle deride, the proud disdain,
>   These simple blessings of the lowly train ;
>   To me more dear, congenial to my heart,
>   One native charm, than all the gloss of art ;
>   Spontaneous joys, where nature has its play,
>   The soul adopts, and owns their first born sway :
>   Lightly they frolic o'er the vacant mind,
>   Unenvy'd, unmolested, unconfin'd.

Translate into Latin prose :—

The navy maintained by the emperors might seem inadequate to their greatness ; but it was fully sufficient for every useful purpose of government. The ambition of the Romans was confined to the land, nor was that warlike people ever actuated by the enterprising spirit which had prompted the navigators of Tyre, of Carthage, and even of Marseilles, to enlarge the bounds of the world, and to explore the most remote coasts of the ocean. To the Romans the ocean remained an object of terror rather than of curiosity ; the whole extent of the Mediterranean, after the destruction of Carthage and the extirpation of the pirates, was included within their provinces.

ENGLISH LANGUAGE.

Examiner, Professor ARMSTRONG.

1. Describe, and illustrate by examples, the changes in the form and sound of words which cannot be classed with the permutations which come under Grimm's Law.

2. Endeavour to account for the fact that, whereas "in the oldest English written language, from the ninth to the end of the eleventh century, we find scarcely any traces of Celtic words," we yet find traces of words of Celtic origin with considerable frequency in the old writers from the thirteenth century downwards, and in northern provincial dialects.

3. Contrast the Latin words in the language of the Second Period with those in the language of the Third Period ; and account for their differences of form and character.

4. Give examples of words of Scandinavian origin in Norman-French and in English respectively.

5. State accurately the chief grammatical differences between the oldest English and the English of the present day.

6. Decline *day, fœt,* and *dress.*

7. Name the classes of words which belong respectively to the First and Second Declensions of the Indefinite Form of the A. S. adjectives.

8. Write out the several tenses of the verb *sceāþan.*

9. Make a metrical analysis of the following passage, explaining the metrical and grammatical rules which guide you ; parse the first two lines minutely ; and render the whole passage accurately in modern English prose :—

>   "This thing was graunted, and oure othes swore
>   With ful glad herte, and prayden him also
>   That he wolde vouchesauf to doon so,
>   And that he wolde ben oure governour,
>   And of oure tales juge and reportour,

And set a souper at a certeyn prys ;
And we wolde rewled be at his devys,
In heygh and lowe ; and thus by oon assent,
We ben accorded to his juggement."

10. Name the principal English and Anglo-Norman authors from the Conquest to the death of Chaucer, and describe the various characteristics of the literature of that period.

11. Explain the relations of the language and literature of the English people to their political history during the same period.

MODERN LANGUAGES.

Examiner, Professor DE VÉRICOUR.

N.B.—This paper was common to the candidates for Second and Third Year Scholarships, and the Senior Scholarship in Modern Languages, Literature, and History in Arts ; and for the Scholarships of the Second Year in Medicine and Engineering. Medical Students were expected to answer the three first questions only.

a. Translate into French :—

Scipio landed in Africa. His first step was to restore discipline to the army. He next took by storm Megara, a suburb of Carthage, and then proceeded to construct a work across the entrance of the harbour, to cut off the city from all supplies by sea. But the Carthaginians defended themselves with a courage and an energy rarely paralleled in history. While Scipio was engaged in this laborious task, they built a fleet of fifty ships in their inner port and cut a new channel, communicating with the sea. Hence, when Scipio at length succeeded in blocking up the entrance of the harbour, he found all his labour useless, as the Carthaginians sailed out to sea by the new outlet. But this fleet was destroyed after an obstinate engagement which lasted three days. At length, in the following year, Scipio had made all his preparations for the final assault. The Carthaginians defended themselves with the courage of despair. They fought from street to street, and from house to house, and the work of destruction and butchery went on for six days.

b. Translate into French, German, or Italian :—

The Conqueror and his descendants to the fourth generation were not Englishmen : most of them were born in France : they spoke the greater part of their lives in France : their ordinary speech was French : almost every high office in their gift was filled by a Frenchman : every acquisition which they made on the Continent estranged them more and more from the population of our island. One of the ablest among them, indeed, attempted to win the hearts of his English subjects by espousing an English princess. But, by many of his barons, this marriage was regarded as a marriage between a white planter and a quadroon girl would now be regarded in Virginia. In history he is known by the honourable name of Beauclerc ; but, in his own time, his own countrymen called him by a Saxon nickname, in contemptuous allusion to his Saxon connexion.

MACAULAY.

1. State the difference between the verbs *reformer* and *réformer* ; *recréer* and *récréer* ; *reprouver* and *réprouver* ; *repartir* and *répartir*.

2. What is understood by the word *Renaissance* ?

3. Which are the fundamental differences between the theatrical school of England, as represented by Shakespeare, and that of France, as represented by Racine? *Appendix D. Scholarship Examinations.*

4. Mention some of the French Onomatopeia.

5. Mention the periods when the literatures of Italy, Spain, England, and Germany exercised an influence on that of France.

6. State what you know of the life and works of one of the following authors : Lafontaine, Bossuet, Madame De Sevigné.

7. Give a short account of the life and works of Lessing, and of his influence on German literature.

8. Explain the double influence of Petrarca and Boccaccio on Italian literature, and on the revival of classical literature.

SCIENCE SCHOLARSHIPS—FIRST YEAR.

MATHEMATICS.

Examiner, Professor NIVEN.

N.B.—This Paper and the following one were common to candidates for a Scholarship of the First Year in Arts, Engineering, and Medicine.

FIRST PAPER.

N.B.—The University Prizes in Geometry were awarded for answers in this Paper.

1. In any triangle the greater side has the greater angle opposite to it.

2. If a triangle and a quadrilateral stand on the same base, the triangle enclosing the quadrilateral, and none of the angles of the latter being re-entrant, the perimeter of the triangle is greater than that of the quadrilateral.

3. If the square on one side of a triangle be equal to the sum of the squares on the other two sides, the triangle is right-angled.

4. Describe a triangle having one side given, the area and the sum of the other two sides.

5. The angle at the centre of a circle is double the angle at the circumference. If two chords of a circle be drawn intersecting each other, the angle between them will be half the sum or difference of the angles subtended at the centre by the arcs intercepted between them according as the point of intersection is within or without the circle.

6. If a chord of a circle and a tangent be drawn from an external point, the square on the tangent is equal to the rectangle under the segments of the chord.

7. Describe a polygon which shall be similar and similarly situated to a given polygon.

8. If perpendiculars be drawn from any point of a circle upon two tangents and their chord of contact, the perpendicular on the chord of contact is a mean proportional between the perpendiculars on the tangents. Describe a circle passing through a given point and touching two given straight lines.

9. D, E, F are the middle points of BC, CA, AB, and P is any point on EF. BP, CP are joined and produced to meet DE, DF respectively in R, Q; prove that AP, BQ, CR are parallel and that QR passes through A.

10. Inscribe in a triangle a parallelogram similar to a given parallelogram, having a side coinciding with a side of the triangle, and its other angles lying on the other-two sides of the triangle.

SECOND PAPER.

1. State and prove the rule for multiplying two decimal fractions together.

Express as a vulgar fraction 2·305.

2. A merchant received three consignments of goods, consisting of 85, 160, and 45 parcels respectively. For each of the first consignment he paid £3 12s. for each of the second £1 12s. 6d., and for each of the third £2 15s. On these consignments he made profits respectively of 20, 12, and 4 per cent. What did he gain on the whole, and what rate per cent. profit had he on his total outlay ?

3. The sides of a triangular field are 225 mètres, 425 mètres, and 250 mètres. Express the area of the field in square yards and in acres. [You may take a mètre equal to 39·4 inches.]

4. Prove that—
$$(a-2b)^2 + (b-2a)^2 + (a+b)^2 = 3(a-2b)(b-2a)(a+b).$$

5. Find the G. C. M. of
$$x^3 - x^2 - 4x + 3 \text{ and } 4x^3 - 5x^2 + 2,$$
and the L. C. M. of
$$a^3 - b^3 - c^3 - 3bc, \ b^3 - c^3 - a^3 + 3ca, \ c^3 - a^3 - b^3 + 3ab.$$

6. Simplify the following expressions :—
$$\frac{a-b}{a-b} + \frac{a^3+b^3}{a^2-b^2} - \frac{a^3-b^3}{a^2+b^2} - \frac{a-b}{a+b},$$
and divide the first by the second.

7. Solve the following equations :—

   (1.) $\dfrac{6x+5}{4x+3} = \dfrac{3x-1}{2x-7} ;$

   (2.) $\dfrac{x-1}{x+3} + \dfrac{x+3}{x-1} = \dfrac{2x+4}{x} ;$

   (3.) $x^2 + y^2 - xy = 7, \ 3xy - (x+y) = 5.$

8. A well, which is fed by a constant spring, is provided with two pumps, whose efficiencies are as 5 : 4. The first pump is worked for half an hour, and half an hour after this the height of the water in the well is noted and it is found to be three-fourths full. Both pumps are then put in operation, and in an hour and a half the water is reduced to its original level, and the pumping being continued, the well becomes dry in three hours. How full was the well originally, and how long will the spring take of itself to fill the well ?

9. Sum the series :—
$$\tfrac{2}{3} + 2 + \tfrac{9}{2} + \dots \text{ to } 16 \text{ and to } n \text{ terms},$$
$$1 + 1\tfrac{1}{3} + 2\tfrac{1}{4} + \dots \text{ to } 8 \text{ terms and to infinity.}$$

10. The natural numbers 1, 2, 3 . . . are written down in order, and every third term is cut out, and from the resulting series all but the third terms are cut out. Find the first six terms of the series so obtained, the $2n^{\text{th}}$ term and the $(3n+1)^{\text{th}}$ term.

Show also that the nth term may be written $\dfrac{9n}{2} - \tfrac{3}{4}(1-1)^n$.

11. Determine the sines of 30° and of 675°.

12. Prove the formulæ :—
$$\sin 2A = 2 \sin A \cos A,$$
$$\sin (A + 45°) - \sin (A - 45°) = \sin 2A.$$

13. Given two angles and a side of a triangle, determine the remaining sides and angles.

Prove that in any triangle $a^2 - b^2 : c^2 : : \sin \overline{A-B} : \sin \overline{A+B}.$

SCIENCE SCHOLARSHIPS—SECOND AND THIRD YEARS.

MATHEMATICS.

Examiner, Professor NIVEN.

N.B.—Subject to the modifications pointed out below, this Paper was also given to candidates for Scholarship of the second year in Engineering.

1. Prove that similar triangles are in the duplicate ratio of their homologous sides.

2. Inscribe a square in a triangle so as to have one side coincident with a side of the triangle and the remaining two angles lying on the other two sides of the triangle.

Extend also the construction to the case where the inscribed figure is a parallelogram similar to a given parallelogram.

3. Solve the equations:—

(1.) $x - \dfrac{1}{x^2} - \dfrac{y}{x}\left(1 - \dfrac{1}{x}\right) = 0.$

(2.) $(x - y)^2 - (x - y)^3 = \dfrac{3}{4}, \ x^3 - y^3 = 28.$

4. Find the number of combinations of n things taken r together. Prove also *directly*, that—

$$_n C'_r = \, _{n-1}C'_r + \, _{n-1}C'_{r-1}.$$

5. Find the sum of the following series:—

$$1^2 + 2^2 + 3^2 + \ldots \text{ to } n \text{ terms.}$$

$$1 + 3x + 5x^2 + \ldots \text{ to infinity.}$$

6. Express as a product $\cos A + \cos B$.

Given : $\sec \theta = \cos \theta + \tan \theta$, obtain the equation which gives $\tan \dfrac{\theta}{2}$, and prove that if $\tan \dfrac{\alpha}{2}$ and $\tan \dfrac{\beta}{2}$ be its two values; then—

$$\tan \dfrac{\alpha}{2} \tan \dfrac{\beta}{2} = \tan^3 \dfrac{\gamma}{2}.$$

7. Solve a triangle, having given two sides and the included angle. If r be the radius of the inscribed circle of a triangle A B C, $r_1 \, r_2 \, r_3$ the radii of the three escribed circles, prove that $rr_1 + r_2 \, r_3 = bc$.

8. If a rational integral algebraic equation have an imaginary root of the form $a + b\sqrt{-1}$, it will also have another root $a - b\sqrt{-1}$: prove this.
It is known that the equation $x^4 - 2x^3 + 16x - 15 = 0$ has a root of the form $1 + a\sqrt{-1}$: find all the roots.

9. Find the equation of the straight line which passes through a fixed point and cuts off a given length from the axis of x.
Find also the length and equation of the perpendicular from the point $(2, 1)$ upon the line $x - 7y = 0$.

10. Find the equation which represents the circle described round the triangle A B C, taking for axis of co-ordinate the line B C, and the line which bisects B C at right angles.
Obtain also the equation of the tangents at B, C.

11. Define and find the equation of an ellipse.

12. If a straight line which meets a plane be at right angles to two straight lines in the plane cutting it, it will be at right angles to every line in the plane which cuts it.

[N.B.—Candidates for the Scholarship in Engineering substituted for 9, 10, 11 above, the following questions.]

9. Prove that spherical isosceles triangles have the angles opposite the equal sides also equal.

10. What are the poles of the sides of a spherical triangle ? Obtain

G

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tions.

the relations which connect the sides and angles of the polar and primitive triangles.

11. Given the sides of a spherical triangle, solve it. If there are A D, B E, C F, be drawn from the angles A B C of a spherical triangle perpendicular to the opposite sides, prove that—

cos 13 D, cos C E, cos A F =cos C D, cos D B, cos A E.

SENIOR SCHOLARSHIPS.

I.—ANCIENT LANGUAGES AND HISTORY.

GREEK.

Examiner, Professor BOULGER.

Translate :—

THUCYDIDES, III., 61.

τοὺς μὲν λόγους φᾶ ἂν γράμψαθα εἰσιτάν, εἰ καὶ αὐτοὶ βραχέως τὸ ἐρωτηθὲν ἀπεκρίναντο καὶ μὴ ἐφ᾽ ἡμᾶς προετρέψαντο κατηγορίαν ἐπωθησάντο τε ταξ ιέπεποτ μετὰ τούτων ἐξω τῶν προκειμένων καὶ ἅμα οὐδὲ ἠτιαμένων πολλὴν τὴν ἀπολογίαν καὶ ἔπαινον ὧν οὐδεὶς ἐμέμψατο. νῦν δὲ πρὸς μὲν τὰ ἀντειπεῖν δεῖ, τῶν δὲ ἔλεγχον ποιησάσθαι, ἵνα μήτε ἡ ἡμετέρα αὐτοὺς ἀρετὴ μήτε ἡ τούτων ὠφελῇ, τὸ δ᾽ ἀληθὲς περὶ ἀμφοτέρων ἀκούσαντες κρίνητε. ἡμεῖς δὲ αὐτοῖς δίάφοροι ἐγενόμεθα πρῶτον ὅτι ἡμῶν κτισάντων Πλάταιαν ὕστερον τῆς ἄλλης Βοιωτίας καὶ ἄλλα χωρία μετ᾽ αὐτῆς, ἃ ξυμμίκτους ἀνθρώπους ἐξελάσαντες ἔσχομεν, οὐκ ἠξίουν οὗτοι, ὥσπερ ἐτάχθη τὸ πρῶτον, ἡγεμονεύεσθαι ὑφ᾽ ἡμῶν, ἔξω δὲ τῶν ἄλλων Βοιωτῶν παραβαίνοντες τὰ πάτρια, ἐπειδὴ προσηναγκάζοντο, προσεχώρησαν πρὸς Ἀθηναίους καὶ μετ᾽ αὐτῶν πολλὰ ἡμᾶς ἔβλαπτον, ἀνθ᾽ ὧν καὶ ἀντέπασχον.

SOPHOCLES—*Antigone*, 771–783.

Ἔρως ἀνίκατε μάχαν,
Ἔρως, ὃς ἐν κτήμασι πίπτεις,
ὃς ἐν μαλακαῖς παρειαῖς
νεάνιδος ἐννυχεύεις,
φοιτᾷς δ᾽ ὑπερπόντιος ἔν τ᾽ ἀγρονόμοις αὐλαῖς·
καί σ᾽ οὔτ᾽ ἀθανάτων φύξιμος οὐδεὶς
οὔθ᾽ ἁμερίων σέ γ᾽ ἀνθρώπων, ὁ δ᾽ ἔχων μέμηνεν.
σὺ καὶ δικαίων ἀδίκους
φρένας παρασπᾷς ἐπὶ λώβᾳ·
σὺ καὶ τόδε νεῖκος ἀνδρῶν
ξύναιμον ἔχεις ταράξας·
νικᾷ δ᾽ ἐναργὴς βλεφάρων ἵμερος εὐλέκτρου
νύμφας, τῶν μεγάλων οὐχὶ πάρεδρος
θεσμῶν· ἄμαχος γὰρ ἐμπαίζει θεὸς Ἀφροδίτα.

DEMOSTHENES—*De Corona*, 330.

ἀΐτα τῶν πρότερον γεγενημένων ἀγαθῶν ἀνδρῶν μέμνησαι. καὶ καλῶς ποιεῖς· οὐ μέντοι δίκαιόν ἐστιν, ὦ ἄνδρες Ἀθηναῖοι, τὴν πρὸς τοὺς τετελευτηκότας εὔνοιαν ὑπάρχουσαν ὑμῖν προλαβόντα ἐμὲ πρὸς τούτους ἐξετάζειν καὶ παραβάλλειν τὸν νῦν τῶν ζῶντα μεθ᾽ ὑμῶν. τίς γὰρ οὐκ οἶδε τῶν πάντων ὅτι τοῖς μὲν ζῶσι πᾶσιν ὕπεστι τις ἢ πλείων ἢ ἐλάττων φθόνος, τοὺς τεθνεῶτας δὲ οὐδὲ τῶν ἐχθρῶν οὐδεὶς ἔτι μισεῖ; ὁ οὕτω δὲ τούτων ἐχόντων φύσει, πρὸς τοὺς πρὸ ἐμαυτοῦ νῦν ἐγὼ κρίνωμαι καὶ θεωρῶμαι; μηδαμῶς· οὔτε γὰρ δίκαιον, ὦ Αἰσχίνη, οὔτε ἴσον· ἀλλ᾽ πρὸς σὲ καὶ ἄλλον εἴ τινα βούλει τῶν ταὐτά σοι προῃρημένων καὶ ζώντων. κἀκεῖνο σκόπει. πότερον κάλλιον καὶ ἄμεινον τῇ πόλει διὰ τὰς τῶν πρότερον εὐεργεσίας, οὔσας ὑπερμεγέθεις, οὐ μὲν οὖν εἴποι τις ἂν ἡλίκας, τὰς ἐπὶ τὸν παρόντα βίον γιγνομένας εἰς ἀχαριστίαν καὶ προπηλακισμὸν ἄγειν, ἢ πᾶσιν, ὅσοι τι μετ᾽ εὐνοίας πράττουσιν, τῆς παρὰ τούτων τιμῆς καὶ φιλανθρωπίας

μετείναιν· καὶ μὴν εἰ καὶ ταῦτ᾽ ἔχει καλῶς, οὐ γὰρ ἡμεῖς οἱ νῦν πολιτείαι καὶ προσῆκον, ἂν Agroechia D.
τῇ ὁμοίῳ σεισθῇ, ταῖς τῶν τῶν ἱππαρχησομένων ὀρθῶσε ἡμεῖς καὶ ταῦτ᾽ βουλομένου
φανήσεται, ἢ δ᾽ οὖ τοῖς τῶν νῦν τοιούτους τότε σκευοποιησάντων· δῆλον γὰρ ἔτι καὶ Examiner
κατ᾽ ἐκείνους ἦσάν τινες, οἱ διάτυρον μὲν τοῖς δὲ ἔπραττε τότε, τοῖς δὲ πρότερον γεγενημένοι
νους ἐπήνουν, βλάσκανον πρᾶγμα καὶ ταύτὰ πάσσοντος νῦ.

THEOCRITUS, VII, 128.

τόσσ᾽ ἐράμαν᾽ ἄ μεν τὸ λαγωβόλον, ἄλλα γελάσσας,
ὡς πάρος, ἐκ Μωσᾶν ξενίῳ ὤπασε πᾶαν.
χῶ μὲν ἀποκλίνας ἐπ᾽ ἀριστερὰ τὰν ἐπὶ Πύξας
εἷρφ᾽ ὁδὸν· αὐτὰρ ἐγώ τε καὶ Εὔκριτος ἐς Φρασιδάμω
στραφθέντες χὡ καλὸς Ἀμύντιχος ἔν τε βαθείαις
ἀδείας σχοίνοιο χαμευνίσιν ἐκλίνθημες,
ἔν τε νεοτμάτοισι γεγαθότες οἰναρέοισι.
πολλαὶ δ᾽ ἄμμιν ὕπερθε κατὰ κρατὸς δονέοντο
αἴγειροι πτελέαι τε· τὸ δ᾽ ἐγγύθεν ἱερὸν ὕδωρ
Νυμφᾶν ἐξ ἄντρου κατειβόμενον κελάρυζε.
τοὶ δὲ ποτὶ σκιαραῖς ὀροδαμνίσιν αἰθαλίωνες
τέττιγες λαλαγεῦντες ἔχον πόνον· ἀ δ᾽ ὀλολυγών
τηλόθεν ἐν πυκιναῖσι βάτων τρύζεσκεν ἀκάνθαις.

THEOPHRASTUS, V.

ἡ μὲν οὖν πορεία δόξειεν ἂν εἶναι, εἰ τόνῳ λαβεῖν, προσποίησις ἐπὶ χεῖρον πράξεων
καὶ λόγων, ἡ δ᾽ εἴρων τοιοῦτός τις οἷος προσελθὼν τοῖς ἐχθροῖς ἐθέλων λαλεῖν, οὐ μισεῖν·
καὶ ἐπαινεῖν παρόντας αἷς ἐπέθετο λάθρᾳ καὶ τούτοις συλλυπεῖσθαι ἡττημένοις· καὶ
συγγνώμην δὲ ἔχειν τοῖς αὑτὸν κακῶς λέγουσι καὶ ἐπὶ τοῖς καθ᾽ ἑαυτοῦ λεγομένοις· καὶ
πρὸς τοὺς ἀδικουμένους καὶ ἀγανακτοῦντας πράως διαλέγεσθαι· καὶ τοῖς ἐντυγχάνειν
καὶ σπουδῇ βουλομένοις προστάξαι ἐπανελθεῖν· καὶ μηδὲν ὧν πράττει ὁμολογῆσαι
ἀλλὰ φῆσαι βουλεύεσθαι.

Translate into Greek prose —

All attempt at resistance now ceased. The fate of the Inca soon spread
over town and country. Every man thought only of his own safety.
Even the soldiery encamped on the adjacent fields took the alarm, and
learning the fatal tidings were seen flying in every direction before their
pursuers, who in the heat of triumph showed no touch of mercy. At
length night, more pitiful than man, threw her friendly mantle over the
fugitives, and the scattered troops of Pizarro rallied once more at the
sound of the trumpet in the bloody square of Caxamalca.

Translate into Greek verse :—

Forsake me not thus, Adam ! Witness, Heaven,
What love sincere, and reverence, in my heart
I bear thee, and unwecting have offended,
Unhappily deceived ! Thy suppliant
I beg and clasp thy knees : bereave me not
Whereon I live,—thy gentle looks, thy aid,
Thy counsel, in this uttermost distress !

LATIN.

Examiner, Professor LEWIS.

Subject for a Latin essay :—

Nihil est agriculturâ melius, nihil uberius, nihil dulcius.
CICERO.—*De Officiis,* lib. i. c. 42.

Translate into Latin verse:—

> He first the taste of flesh from tables drove,
> And argued well, if arguments could move,—
> O mortals! from your fellows' blood abstain,
> Nor taint your bodies with a food profane ;
> While corn and pulse by nature are bestowed,
> And pliant orchards bend their willing load ;
> While laboured gardens wholesome herbs produce,
> And teeming vines afford their generous juice ;
> Nor tardier fruits of cruder kind are lost,
> But tamed with ripe, or mellowed by the frost.

II.—MODERN LANGUAGES, LITERATURE, AND HISTORY.

The English Language and Literature.

Examiner, Professor Armstrong.

1. Describe what appear to have been the effects of the introduction of printing on the English language.

2. Write a brief abstract of the narrative portion of Wordsworth's *Excursion*.

3. Compare the verse of Coleridge with that of Shelley ; point out what appear to you to be its salient characteristics, and illustrate your criticisms by examples.

4. Compare the conduct of the story of *Christabel* (as far as it goes) with that of *Marmion*, as an illustration of the genius of the authors respectively.

5. Explain the moral purport of the *Ancient Mariner*.

6. Trace the course of Childe Harold's wanderings as described in the Fourth Canto of the poem.

7. Point out those passages of *Childe Harold* for the spirit (if not the thoughts) of which Byron seems to have been indebted to the influence of Shelley.

8. Name the several poets, besides Shelley, traces of whose influence are apparent throughout the writings of Lord Byron.

9. Write out a brief analysis or argument of Shelley's *Adonais* ; describe the occasion of the poem, and give an account of the life and writings of Keats.

10. Name the poets who were intimately associated with Wordsworth, Byron, and Shelley, respectively ; name the chief poems, and characterise the genius of each.

11. Analyze the prose style of Charles Lamb.

12. Give a brief account of one of the following essays of Lamb:— (*a*) " The Artificial Comedy of the Last Century " ; (*b*) " The Genteel Style in Writing " ; (*c*) " The Barrenness of the Imaginative Faculty in the Productions of Modern Art."

MODERN HISTORY.

Examiner, Professor Armstrong.

1. Describe the events of the French Revolution to the flight of Louis XVI.

2. Sketch briefly the characters and early history of Mirabeau and Lafayette.

3. Give an abstract of the defence set up on Louis's behalf by his counsel.

By whom was the defence conducted ?

4. Sketch, in outline, the chief events in the career of Napoleon to *Appendix D.* the victory of Marengo. *Scholarship*

5. Give an account of the battle of Austerlitz, and its immediate *Examina-* results. *tions.*

6. Describe briefly Napoleon's Russian Campaign.

7. Sketch the principal domestic events in the history of England during the reign of George IV.

8. Examine the influences of the Revolutionary movement on the contemporary literature of England.

MODERN LANGUAGES.

Examiner, Professor DE VÉRICOUR.

(See Literary Scholarships of Second and Third Years, p. 94, for this Paper.)

NATURAL PHILOSOPHY.

Examiner, Professor ENGLAND.

1. Two weights connected by a fine string rest on a rough vertical arc of a circle on which the string lies : prove that the angle subtended at the centre by the distance between the limiting positions of either weight is $2 \tan^{-1} \mu$.

2. Find the centre of gravity of the area included by the curve $r=a$ $(1-\cos \theta)$.

3. Prove that a uniform circular motion is equivalent to two simple harmonic motions at right angles to each other.

4. Prove the principle of equable description of areas by a particle acted on by a central force.

5. Explain the phenomenon of the rainbow.

6. Find the sun's declination when it rises at the N.E. point in a given latitude.

7. It is required to construct an achromatic lens of given focal length : knowing the dispersive powers of the component lenses, determine their focal lengths.

8. Assuming the second, gramme, and centimetre as the units of time, mass, and length, determine the unit quantity of electricity and unit difference of potential.

9. A magnetic needle is suspended by silk fibres (as in Coulomb's balance); show how to arrange it, that there may be no torsion when the needle lies in the magnetic meridian.

10. Give Fresnel's construction for the paths of the ordinary and extraordinary rays in a uniaxal crystal.

11. How is it shown that in some crystals, heat is propagated in different ways, in different directions.

12. Explain on the undulatory theory of light the formation of bands, when a small pencil of light passes through a narrow aperture.

VII.—NATURAL HISTORY.

BOTANY AND ZOOLOGY.

Examiner, Professor REAY GREENE.

1. What British phenogams belong to the category of coloured parasites? Refer these plants to their respective families.

2. Indicate the modifications which the perianth undergoes within the limits of the order Alismaceæ (including Butomeæ and Juncagineæ).

3. Describe the formation of lobed and compound leaves. Account for such cases as those of the maple, lupin, and strawberry.

4. Describe the spore-fruit of Marsilia, comparing is with that of Isoëtes.

5. Give an account of the structure and life-history of any well known ascomycetous fungus.

6. Compare the shell of Teredo with that of an ordinary bivalve.

7. With what appendages of a hexapod insect are the legs of a spider homologous?

8. Name those families of physostomous fishes which have representatives in the fresh-waters of Ireland.

9. Contrast the skulls of amphisbenians with those of (a) typical snakes and (b) ordinary lizards (=Kionocrania).

10. Describe the characteristic modifications of the skeleton of the limbs in the kangaroos and bandicoots (Peramelida).

School of Engineering.

SESSIONAL EXAMINATIONS.—FIRST YEAR.

(See Sessional Examinations in Arts, pp. 75, 76, for the papers in Mathematics ; p. 86 for the paper in Chemistry ; p. 87 for the paper in Mineralogy, Geology, and Physical Geography ; and p. 74 for the paper in Modern Languages.)

GEOMETRICAL DRAWING.

Examiner, Professor JACK.

1. Describe a circle to touch two others, one of them at a given point.

2. Given the axes of an ellipse ; construct is by points.

3. What is meant by the projections of a point and a curve on a plane?

4. Given the projections of a line and the traces of a plane ; find the traces of a plane passing through the line and perpendicular to the plane.

5. Construct the length of the line joining two points whose projections are given.

6. Construct the projections and real size of the section by a plane perpendicular to the vertical plane of reference of a right circular cone with its axis vertical, the plane being parallel to one side of the cone.

7. The sides of a triangle are 3, 5, and 7 inches, it lies in a plane making 20 degrees with the horizontal, the 3-inch side makes 15 degrees with the trace of the plane ; find its horizontal projection.

8. Find the projections of the intersection of a right circular cylinder having its axis vertical and a sphere.

9. The distance of the picture is 12 inches, a line lies in a vertical plane perpendicular to the picture, and makes 30 degrees with the horizontal ; find its vanishing point.

10. From a given point in the perspective of this line show how to set off the perspective of a given length by a construction in the picture.

SESSIONAL EXAMINATIONS.—THIRD YEAR.

MIXED MATHEMATICS.

Examiner, Professor ENGLAND.

1. If P, P', &c., be a system of parallel forces, the distances of the points of application of which, from a given plane, are respectively z, z', z'', &c. ; if R be their resultant, and $\bar{z}$ the distance of its point of application from the same plane, prove that

$$R\bar{z} = Pz + P'z' + P''z''\, dx.$$

2. Find the distance of the centre of gravity of the frustum of a right cone from its base, in terms of its height and the radii of its ends.

3. Investigate the equation of the common catenary.

4. A body is projected at a given angle with a given velocity ; show how to determine its path and its velocity when moving in a given direction.

5. Find the centre of pressure of a triangle whose vertex is in the fluid and base horizontal.

6. Show how to determine the meridian of a place by means of equal altitudes of the sun.

7. A body falls from an infinite distance toward a centre of force, the force varying inversely as the square of the distance ; find its velocity at a given distance from the centre.

8. Find the law of force which will cause a body to move in an ellipse of which the centre is the centre of force.

9. In getting time by means of the sun's altitude, calculate the error in time arising from a given small error in altitude.

APPLIED MECHANICS.

Examiner, Professor ENGLAND.

1. If 5 cwt. of a material are drawn from a depth of 100 fathoms by a rope, each foot of which weighs ·67 lbs., how many units of work are expended in raising it ?

2. A bar, whose length is l and section s, is gradually elongated by a length e ; if k be its modulus of elasticity, find the work expended on its elongation.

3. A rectangular mass of iron rests on an inclined plane of oak, with one diagonal of its base parallel to the intersection of the plane with the horizon ; it is on the point of slipping down, and also of overturning ; if its base be 2 feet square, what is its height, the coefficient of friction between it and the plane $= ·65$?

4. Investigate the condition of equilibrium of a screw, taking account of the friction of the thread and of the end of the screw.

5. Determine the equation to the line of resistance in a river wall whose specific gravity is 2·6 and thickness 4 feet, and which sustains the pressure of water whose surface is in the level of the top of the wall.

6. Calculate the moment of inertia of a rectangular parallelopiped whose edges are a, b, c, with regard to an axis passing through its centre of gravity, and parallel to the edge c.

7. A body rotating round a fixed axis has in a given interval its angular velocity changed from ω to ω', find the number of units of work done upon it in that interval.

8. A thin rod 3 feet long turns round one end from an angle of 45° with the horizon, find its angular velocity when it has reached a horizontal position.

9. Prove that in the impact of non-elastic bodies there is a loss of *vis viva* proportional to the square of their relative velocity.

CIVIL ENGINEERING.

Examiner, Professor JACK.

First Paper.

1. Describe the method of carrying on the works in a deep railway cutting, noting the kind of earth-waggons used, and how the roadway is arranged.

Appendix D.

Sessional Examinations.

2. Sketch the cross section of the double-headed rail, and the manner in which it is connected with the sleepers.

3. In a lattice girder bridge intended to carry a double line of railway over a span of 80 feet sketch the construction that you would adopt for the top and bottom members and for the diagonals subject to large compressive and large tensile forces.

4. Describe the screw pile piers sometimes used in bridges, and in what circumstances they are employed.

5. For what purposes are large concrete blocks employed? How are they made? What sizes have been used?

6. Describe the different kinds of masonry.

7. Describe the general arrangements of the firebox, firebox-shell, and boiler of a locomotive.

8. Describe the construction of an eccentric. Why are two necessary in connexion with each cylinder of a locomotive?

9. What are the methods employed in the locomotive for producing a draught in the fire, and for obtaining a large heating surface?

10. Give an account of the general arrangements of the Armstrong hydraulic machinery, and the use that is made of it.

Second Paper.

1. What is meant by tempering steel?

2. Describe the action of the planing machine.

3. If you wished to measure the quantity of water flowing in a stream by means of a V-shaped weir, state the precautions you would take as regards the measurements and the formula you would use, explaining how it has been established.

4. How is it that the length of a piece of iron, subject to a force of compression in the direction of its length, has to be taken into account when you are estimating its strength, but need not be considered if the force be one of tension?

5. What is the neutral axis of a beam? How would you find its position? Illustrate by the case of a double-flanged cast-iron beam.

6. Show that a solid circular beam may have its weight considerably lightened without reducing its strength to the same extent, by boring out the centre.

7. Investigate an expression for the deflection at the end of a beam of constant section fixed at one end and loaded uniformly along its length.

8. In a continuous girder crossing several spans shew that if the pressure on the points of support be known the points of inflection can be found.

9. In a girder braced as in the accompanying sketch, supported at the ends and traversed by a train of uniform density, discuss the stresses produced in the diagonals.

10. Describe the form of structure adopted in the wrought-iron gate of a lock.

Scholarship Examinations.

SCHOLARSHIP EXAMINATION.—FIRST YEAR.

(See papers for First Year's Science Scholarship Examination in the Faculty of Arts, p. 95.)

SECOND YEAR.

(See papers : 1, in *Mathematics*, Science Scholarship Examination of Second and Third Year, in the Faculty of Arts, p. 97 ; 2, in *French*, Literary Scholarship Examination of the Second and Third Years, in the Faculty of Arts, p. 94 ; 3, in *Chemistry* the paper was the same as that for the Scholarship Examination of the Second Year in the Faculty of Medicine.)

Appendix D

GEOMETRICAL DRAWING.

Examiner, Professor JACK.

1. Given span and rise (small) of a circular arc, construct it by points. Prove your method.

2. Given one of the projections of a point in a plane whose traces are given, find the other.

3. Find the traces of a plane passing through a point whose projections are given, and parallel to another plane whose traces are given.

4. Find the angles which a plane given by its traces, makes with the planes of projection.

5. Given the horizontal trace of a cone and the projection of its vertex, find the traces of a plane touching the cone and passing through a point whose projections are given.

6. A piece of timber 5″ × 2″ × 3″ stands on the edge which is 2″ long, this edge makes 25° with the ground line, and one of the long edges makes 30° with the vertical. Draw the projections of the piece of timber.

7. Find the shadow in vertical and on the horizontal plane.

8. Find the projections of the curves of intersection of a vertical right circular cone, and a horizontal cylinder not parallel to the vertical plane of reference.

9. Find the perspective of the line in the figure shown to you, and divide it into three equal parts by a construction in the picture.

THIRD YEAR.

NATURAL PHILOSOPHY.

Examiner, Professor ENGLAND.

N.B.—The following paper (Questions 1 to 10) were common to candidates for the Engineering Scholarships of the third year, and Medical Scholarships of the second year.

1. A body which weighs *w* grains in air, weighs *w'* in water, and *w''* in another liquid, show how to find the specific gravity—

    a. Of the body.

    b. Of the liquid.

2. Explain the construction and method of using Daniell's dew-point Hygrometer.

3. A flame being placed at a distance of twenty inches from a convex lens, a distinct image of it is formed on a screen at five inches on the opposite side of the lens, what is the focal length of the lens?

4. Explain the formation of the brilliant colours observed when a very thin film of oil floats on water.

5. Describe fully the phenomena of capillary action which take place when a small cylindrical tube is immersed—

    a. In a liquid which moistens the tube.

    b. In a liquid which does not moisten it.

6. How would you charge a gold leaf electroscope with positive electricity by induction?

7. State some experiments which prove that bodies in passing from the solid to the liquid state absorb heat; but in passing from the liquid to the solid give out heat.

8. How by means of a dipping needle could you determine the magnetic meridian of a place?

9. Explain the nature of the vibrations of the air in an organ pipe when sounding, and the relation which subsists between the tones of an open and closed pipe of the same length.

10. Show that when a falling body is projected vertically upward it has the same velocity in passing through the same point both in its upward and downward motion.

N.B.—The following questions were given only to Candidates for the Engineering Scholarships.

1. Prove that the sum of the moments of two forces acting in the same plane about any point in that plane, is equal to the moment of their resultant with regard to the same point.

2. Find the position of equilibrium of a heavy beam resting on two smooth inclined planes.

3. Prove that the time of falling down any chord of a vertical circle terminating at its lowest point, is equal to the time of falling down the vertical diameter.

4. A heavy particle has simultaneously impressed on it two velocities, one vertically upward, the other horizontal, find its position at the end of 2 seconds after.

GEOLOGY AND MINERALOGY.

Examiner, Professor HARKNESS.

1. What is false bedding? From what does it originate?

2. Name the principal kinds of Plutonic Rocks and their composition.

3. What is the nature, and what is the origin of Carrara Marble?

4. What is the position of Woolhope Limestone? What are its characteristic fossils?

5. Where, in Ireland, do Upper Silurian Rocks occur?

6. What is the position of the Clyzenia Limestone?

7. What deposits in Ireland represent the Mill-stone grits?

8. What important member is absent from the English Trias?

9. What is the position of the Fullers-earth beds? Where do they occur?

10. What is the nature and position of the Woolwich and Reading series?

11. What is the composition of *Apatite*? To what system of crystals does it belong, and in what form is it usually crystallized?

12. To what family of minerals does *Labradorite* belong? What is its composition?

SURVEYING, LEVELLING, AND MENSURATION.

Examiner, Professor JACK.

1. Describe the method of ascertaining the acreage of a survey from the field book.

2. Describe the construction of the planimeter.

3. A length marked 7′ 8″ on a drawing is found to measure 1·72 inches, construct a scale of feet.

4. The ordinates of a curve taken ⅕-inch apart are 0, ·37, ·55, ·70, ·84, ·92, ·96, ·99, ·88, ·86, ·76, ·49, 0, find the position of the centre of gravity of its area.

5. Describe the checks on a closed traverse survey, and the method of dealing with a small error.

6. Describe the method of finding the latitude of a plane from the meridianal altitude of the sun obtained by the theodolite.

7. In setting up a transit theodolite to take a vertical angle, how can you, within certain limits, get rid of any index error?

8. How would you ascertain whether the horizontal axis of a transit theodolite was at right angles to the vertical axis?

9. Practical examinations with the level.

Faculty of Law.

SESSIONAL EXAMINATIONS—FIRST YEAR.

REAL PROPERTY.

Examiner, Professor O'SHAUGHNESSY.

1. What is comprised within the term "Messuage"? What is a tenement?

2. Why is a life estate an estate of freehold?

3. What right has every tenant for life with respect to cutting timber? What is "voluntary waste"? What is "permissive waste"?

4. What was the effect of a fine on an estate tail? Why were such suits so called?

5. How does a tenant in fee-simple hold lands? To what extent may an estate in fee-simple be aliened?

6. Can an infant hold lands? What is the difference between the conveyancers of infants and of idiots?

7. How far does the liability of fee-simple estates in the hands of the heir or devisee extend as to the debts of the deceased tenant? Why are assets by descent so called?

8. If a feoffment be made to A and his heirs to the use of B and his heirs, what is the result as to A?

If such a feoffment were made before the Statute of Uses, what would A have had?

9. When does a tenancy at will arise? What is a tenancy by sufferance?

10. What, in the contemplation of Equity, is a mortgage? What, in Law, is a mortgage?

THIRD YEAR.

ENGLISH LAW.

1. What are the two species of remedies which arise from the joint act of the parties? Explain what each of them is, and when it effects?

2. Explain the nature of the doctrine of Retainer giving a creditor of him of whom he is executor a remedy by the mere act of law.

3. Under what circumstances does redress by the operation of Remittee arise?

4. What are the two species of jurisdiction belonging to the Court of Exchequer? State what are its operations in each.

5. In what court is the style adopted, *"coram ipsâ reginâ"*? Explain the reason, and mention some incidents of its peculiar jurisdiction.

6. Mention the maxims which illustrate the principle of the Statute of Limitation.

7. What is the nature of the plea called an Avowry? In what kind of action is it used? Wherein does the course of pleading in that action differ from that in other actions.

8. What is the view which the law of England takes of self-murder?

9. How has Sir Edward Coke defined murder?

10. Define what is forgery at Common Law. As regards writings, mention some of the incidents constituting the offence. What is the rule as to evidence of handwriting in such cases?

11. For what is a Writ of Certiorari commonly granted? In what stage of the proceedings may the writ be had?

12. On what is a plea in abatement founded? Why does no advantage accrue to a defendant by reason of pleading a misnomer in abatement?

Faculty of Medicine.

SESSIONAL AND PRIZE EXAMINATIONS.

EXPERIMENTAL PHYSICS.

Examiner, Professor ENGLAND.

1. If the specific heat of copper be ·09, and 300 grains of copper at 100° are immersed in 500 grains of water at 10°, find the resulting temperature.

2. What is meant by the mechanical equivalent of heat?

3. When is the image of an object formed by a concave reflector real, when virtual?

4. How is polarised light distinguished from ordinary light?

5. If an organ pipe gives a note of 512 vibrations per second in air, what note will it give in hydrogen, the density of hydrogen being assumed as $\frac{1}{16}$ that of air?

6. A weight thermometer contains 460 grains of a liquid at 0°, and 450 grains at 20°, find its mean co-efficient of expansion for 1°.

7. Find the specific gravity of a body which weighs 60 grains in air and 35 grains in a liquid, whose specific gravity is ·8.

8. Two parallel forces of 10 and 12 respectively act in opposite directions at 40 inches apart, find the position of their resultant.

9. Find the acceleration produced by a pressure of 1 lb. moving a mass of 10 lbs.

10. Explain the principle of the gold leaf electroscope.

11. Give Ampere's rule for determining the direction in which a magnetic needle is deflected by a current.

12. What is the law of refraction of light?   What is meant by double refraction?

CHEMISTRY.

(See for this Paper, Sessional Examination Papers in the Faculty of Arts, p. 86.)

ANATOMY AND PHYSIOLOGY.

Examiner, Professor CHARLES, M.D.

[In addition to the oral class examinations and the questions 1 and 2 (to which written answers were given by every member of the class after the Christmas recess), First Year Students were required to attempt questions 3, 4, 5, 7, and 12; Second Year Students 5, 6, 7, 8, 9, and 12; and Third and Fourth Year Students 5, 8, 9, 10, 11, and 12.]

3. Give an account of the minute structure of human dentine, and mention the chief varieties of it which are met with in living and extinct animals.

4. Describe carefully the corpuscles and lymphatics of connective tissue.

5. Give an account of the latest views as to the microscopic structure and development of serous and synovial membranes.

6. Describe concisely all the experiments (shown in the class) to demonstrate (1) the properties of glycogen, and (2) the properties and uses of saliva, bile, and pancreatic juice. State also the different steps of the process by which you would prepare pure glycogen in quantity.

7. How does Kles classify reflex actions?   What are Pflüger's laws of reflex action?   Give a brief description of the experiments (shown in the class) by which these laws are exemplified.

8. Discuss Hermann's theory of the function of the auricles.   Give a

brief description of his model heart-pump, and show how he illustrates *Appendix D.*
his views by it. State also what is meant by "negative pressure," and *Sessional and Prize explain how it influences the circulation. Examina-*

9. Define the term "horopter;" and describe minutely (1) the ciliary *tions.*
muscle, (2) the macula lutea, and (3) the membranous semicircular
canals.

10. Describe the development of (1) enamel, (2) the eye, and (3) the
alimentary canal.

11. Give a summary of what is known regarding the functions of the
ganglia at the base of the brain, and describe the experiments by which
these results have been ascertained. What are the views of Carpenter
and Setschenow?

12. Name the specimens under the microscopes numbered 1–8, and
the moist preparations numbered 9–16. State concisely the principal
features described by each.

1. Describe minutely the microscopical characters of striated muscle,
referring specially to the views of Bowman, Kölliker, Engelmann, and
Schäfer.

2. Describe carefully the microscopical characters of unstriated muscle,
referring particularly to the views of Kölliker, Engelmann, and Ellis.

PRACTICAL ANATOMY.

Examiner, Professor CHARLES, M.D.

[In addition to making a Dissection for three hours, First Year Students are required
to answer questions 1, 3, 4, 7, and 8 ; Second Year Students, 1, 3, 5, 6, 7, 8, and 10 ; Third
and Fourth Year Students, 2, 5, 6, 9, 10, and 11.]

1. Describe minutely (1) the sphenoidal process of the palate, (2) the
perpendicular lamella of the ethmoid, (3) the inner surface of the ilium,
and (4) the proximal ends of the second and fourth metatarsal bones.

2. Describe the ossification of the fibula, carpus, and clavicle.

3. Give a detailed account of the attachments, relations, and use of
each of the ligaments connected with the ilium and ulna respectively.
By what method would you expose each ?

4. Trace the peritoneum horizontally (1) on the level of a line half an
inch below the liver, and (2) on a level with the umbilicus. State also
the exact relations of the peritoneum to the descending colon, rectum,
duodenum, and transverse colon respectively.

5. Describe carefully the successive steps of the dissection by which
you would expose all the ligaments attached to the occipital bone and
upper three cervical vertebræ—the soft parts having been previously
removed. (Only a general description of the ligaments themselves to be
given.)

6. Describe accurately the attachments, relations, and nervous supply
of the following muscles :—The flexor brevis pollicis pedis, the multifidus
spinæ, coccygeus, and mylohyoid.

7. Give a minute description of the course, relations, and branches of
the descending thoracic aorta and of the external iliac artery.

8. The abdominal cavity having been opened, describe, in detail, the
method you would adopt in order to demonstrate completely the anatomy
of the alimentary canal from the œsophagus to the anus. (No descrip-
tion of the parts themselves required.)

9. Give a brief account of the synovial membranes of the hand and
foot.

Appendix D.
Sectional and Prize Examinations.

10. Enumerate in order the cutaneous nerves crossed by each of the following lines :—One around the arm, two inches below the acromion process ; another around the middle of the thigh ; a third around the abdomen, on the level of the umbilicus ; and a fourth around the head, above the external ear. Mention also the portions of the head which are not endowed with sensibility by the fifth cranial nerve.

11. Describe concisely the following parts of the encephalon :—(1) the inferior vermiform process ; (2) the arancescent convolutions ; (3) the fasciculus uncinatus ; (4) the posterior medullary velum ; (5) the fillet ; (6) the fascia dentata ; and (7) the corpora geniculata. How would you bring into view, in an entire brain, the four parts last named ?

MATERIA MEDICA AND THERAPEUTICS.

Examiner, Professor O'Keeffe.

Written Examination.

1. Contrast the action of a tonic with that of an alterative. What explanations have been given of the mode of action of medicines of these classes ? When are they indicated and contra-indicated ? Name the most useful drugs in each group, and illustrate (by a prescription) the mode of administration, 1st, of some preparation containing the active principles of Cinchona bark ; 2nd, of an arsenical preparation.

2. What is your opinion of the therapeutic and dietetic value of alcoholic beverages, giving the reasons on which such opinion is founded ?

3. What is the therapeutic action of preparations containing digitalis ? Illustrate, by a prescription, the mode of administration of this drug.

4. What are the physiological and therapeutic actions of Belladonna and Calabar bean respectively ? Doses and modes of administration of each ?

5. How are Morphia and Apomorphia prepared ? How do they differ in their therapeutic action ? Give mode of administration of each.

6. Name and classify the Pharmacopœial preparations of mercury. State the preparation, uses, and mode of administration of Calomel. How would you ascertain its freedom from the presence of corrosive sublimate ?

7. What are the indications for the exhibition of antacids ? Name the most important medicines in the class. Select one, and give its dose and mode of administration.

8. What do you consider an average dose for an adult of the under-named :—

Hydrocyanic acid, Castor oil, Tincture of Aconite, Salicylate of Soda, Fowler's Solution, Acetate of Lead, Sulphate of Magnesia, Chloral hydrate, Liquor Strychnæ.

State very briefly the principal indication for each.

9. What are the constituents of the undernamed pharmacopœial preparations :—

Confectio Scammonii, Emplast. Ferri, Ext. Ergotæ Liq., Mist. Cretæ, Pilula Camphoræ Co., Pulvis Antimonialis, Pulvis Kino Co., Spiritus Ammoniæ Aromaticus, Tinctura Camphoræ Co.

Give average dose of each.

Oral Examination.

Name each of the specimens marked 1, 2, 3, 4, 5, 6. Give the source, therapeutic action, and dose of each.

PRACTICE OF PHYSIC.

Examiner, Professor O'CONNOR.

1. How would you form a diagnosis between gout and rheumatism?

2. How distinguish between scorbutus and purpura, stating the causes and effects of each?

3. What are the principal forms of continued fever and the distinguishing marks of each?

4. What forms of cerebral disease are most prevalent at the different periods of life and the cause of such difference?

5. What are the internal and external causes of blood-poisoning?

6. State some of the effects of chronic alcoholism.

7. What are the symptoms of ataxie locomotrice through its entire course?

8. Why are hepatic diseases more common in tropical than in temperate climates?

9. What is the difference in the appearance of abscess in the liver produced by parenchymatous inflammation and those proceeding from phlebitis? State the cause of such difference.

10. Enumerate and explain the causes of hæmoptoe?

11. What is the *modus operandi* of the various causes of hypertrophy of the heart?

12. Describe the appearance of the lung in a case of arrested tubercle.

SURGERY.

Examiner, Professor TANNER.

1. Describe the changes which take place, during the process of inflammation, in the blood vessels, and also the alterations of tissue, with especial reference to the anatomical constitution, and functions, of the vaso-motor nerves.

2. What are the prevailing doctrines, as to the origin of pus, its varieties, constituents, and also the pathology of cervical abscesses.

3. Describe the causes of mortification, and when amputation is indicated.

4. Relate the causes, symptoms, duration, temperature, and treatment of wound fever.

5. What classification of wounds has been made, and the different methods by which their healing is accomplished?

6. Give the different kinds of aneurism, their pathology, causes, prognosis, and various methods of treatment.

7. How are fractures repaired, and what are the methods of treatment?

8. Describe in detail the operations for the cure of stone in the male bladder, also the indications for their adoption, and the different kinds of lithotrity, and methods of catching the stone.

MIDWIFERY.

Examiner, Professor HARVEY.

1. Give a description of, and detail the points which are requisite to constitute a well-formed pelvis in the human female. What are the most frequent forms of departure from this standard?

2. Describe the form, structure, and relations of the oviduct in the rabbit. What state of parts, occasionally found in the human subject, does this represent?

3. Describe the principal phenomena which take place in the development of the membrana decidua.

4. In the placenta, do the streams of the fœtal and maternal circulations come into absolute contact? Describe how they are circumstanced with regard to each other.

5. Can we, under any circumstances, predict the precise day on which a woman's delivery will take place, and if not, why not?

6. In what respects does the gestation of marsupial animals differ from that of the higher mammalia?

7. Under what forms is rigidity of the os uteri found to exist in the first stage of labour? What are its causes; and how is it to be treated?

8. Under what circumstances is the child born with face to pubis? Mention the course which the head takes; and the character of the labour in this case.

9. A woman is in labour: the membranes have just given way, and a shoulder presents; os uteri very little dilated. Describe minutely your management of the case.

10. What are after-pains? In what patients do they chiefly occur? Give their pathology, and the principles of their prevention and treatment.

MEDICAL JURISPRUDENCE.

A.—MEDICAL PART.

Examiner, Professor O'KEEFFE.

a. Written Examination.

1. To what extent is the chemical test available in examining a stain (suspected to be blood) on an article of clothing, wood, or iron?
    How would you proceed in applying the test?
    To what fallacies is it liable?

2. Is there any difference, in a medico-legal sense, and, if so, when, in the expressions "born alive" and "lived to breathe"?

3. What importance may be attached in a criminal prosecution for murder to the medical evidence as to the presence or absence of rigor mortis? On what circumstances will the time of appearance, and the duration, of this condition, usually depend.

4. What appearances may be presented, externally and internally, in the body of an individual killed by hanging? How do you account for the different signs observed in different cases?

5. Define insanity. Under what circumstances are you justified in placing an insane person under restraint? What forms are necessary in committing an insane person, (1) to a public, (2) to a private asylum?

6. Death has been caused by a gun-shot injury. What circumstances would lead you to conclude that the wound was caused accidentally, homicidally, or suicidally?

7. The viscera of an individual supposed to have been poisoned, are submitted to you for examination (without any history of symptoms, &c.); how would you proceed with such examination?

8. What diseases simulate the symptoms of poisoning by tartar emetic, arsenic, and morphia, respectively? On what would you base your diagnosis in each case?

9. Give an account of any case where you have seen the method of dialysis employed in the separation of a poison from an organic mixture, and the steps subsequently adopted for its identification.

b. Practical Examination.

1. Obtain the characteristic crystals from the blood-stain before you.

2. Name the poisons dissolved in the bottles marked 1, 2, 3, 4. State the symptoms produced and the post-mortem appearances observed in a case of death caused by any one of them. State also the smallest fatal dose of each.

3. What conclusions would you arrive at from an examination of the bones marked A, B, C, as to the age and sex of the bodies from which they have been taken ?

4. Two pieces of cloth, P and Q, are stained, one with ordinary, the other with menstrual blood. Which is which ?

5. What is the probable intra-uterine age of the fœtus placed before you ?

B.—LEGAL PART.

Examiner, Professor O'SHAUGHNESSY.

1. How is the crime of Rape defined in law ? What must be proved in order legally to establish the crime ?

2. How does the law regard one who has attempted suicide, and failed in its perpetration ?

3. Under what circumstances may it be argued that a policy of life insurance should be forfeited by the suicide of the person whose life was insured ?

4. What are the circumstances which will justify a medical practitioner in applying restraint to a person on the grounds of insanity ?

5. Explain the reasons why the plea of insanity of one accused of a crime is admitted as a defence ? By whom is the question decided ?

SCHOLARSHIP EXAMINATIONS.—FIRST YEAR.

(See Papers for Literary and Science Scholarship Examinations in the Faculty of Arts, pp. 88, 95.)

SECOND YEAR.

(For the Paper in Natural Philosophy, *see* Engineering Scholarship of the third year, p. 105.)

BOTANY AND ZOOLOGY.

Examiner, Professor REAY GREENE.

1. Name those British families of Calyciflorœ in which the ovary is inferior. Draw up a brief analytical table, showing the characters by which these families may readily be distinguished from one another.

2. Describe the spore-fruit of Sphagnum, contrasting it with that of other mosses.

3. In what vegetable and animal structures has the phenomenon of free cell-formation, as distinguished from ordinary cell-division, been observed ?

4. Write concise definitions of the principal groups of cephalophorous mollusks, noting the pteropods (excluding Dentalium), the heteropods, the branchiate gasteropods, and the pulmonate gasteropods.

5. Enumerate and refer to their proper regions the splint-bones of the crocodile's skull.

H

ANATOMY AND PHYSIOLOGY.

Examiner, Professor CHARLES.

1. Give a concise account of the observations and experiments by which it can be shown that contractility is a function inherent in muscular fibre and independent of nervous influence.

2. Describe the microscopical characters of (*a*) a connective tissue corpuscle; (*b*) a fat cell; (*c*) a bone corpuscle; (*d*) a nerve cell; and (*e*) a white blood corpuscle.

3. What is the fundamental structure of a gland? What is a lymphoid organ? Give a recent classification of glands with as many examples of each class as possible.

4. Describe the arrangement of the muscular fibres of the heart. State the exact mode of action of the mitral and tricuspid valves.

5. Give a brief account of the chemical characters of chondrin, globulin, peptone, gelatin, and glycogen.

6. Name the specimens under the microscopes numbered 1–8, and the moist preparations numbered 1–5.

THIRD YEAR.

ANATOMY AND PHYSIOLOGY.

Examiner, Professor CHARLES.

1. Describe carefully the action of water, acids, alkalies, electricity, warmth, and gases on blood corpuscles. By what arrangement would you make the observation in each case?

2. Give a minute account of the structure of arteries. How do arteries influence its circulation?

3. Describe minutely the microscopical appearances of a transverse section of a hair and its follicle made through the middle of the hair papilla. If possible, illustrate your description by a diagram.

4. By what means would you demonstrate the electric currents of muscle and nerve? What is meant by the electrotonic condition of a nerve, and how is it influenced by the passage of a constant electrical current?

5. Give a full account of the structure of the olfactory region.

6. Name the specimens under the microscopes numbered 1–8, and the moist preparations numbered 1–5.

PRACTICAL ANATOMY.

Examiner, Professor CHARLES.

1. Give a concise account of the classification of joints described in the lectures of last Session. Group together the examples of each order.

2. Describe carefully the movements of flexion, extension, adduction, abduction, inversion, and eversion of the foot. At what joint or joints do they take place? Group together the muscles which produce each movement, and state the nervous supply of every muscle you name.

3. Describe the structure, relations, dimensions, and development of the Eustachian tube. Give the attachments and uses of the muscles attached to it. What views are entertained as to its function?

4. Describe completely the dissection of the thorax. [No description of the parts themselves required.]

5. When the subclavian artery has been ligatured in the third stage, by what means is the circulation in the upper extremity of that side maintained?

6. Name the specimens numbered 1–10, and say to which side of the body each belongs.

MATERIA MEDICA AND THERAPEUTICS.

Examiner, Professor O'KEEFFE.

1. How are astringents said to act? Name the most useful remedies in this class. Select one and give the chemical (or botanical history), physiological, and therapeutical actions, dose, and a prescription showing its mode of administration.

2. Contrast the physiological actions of opium, bromide of potassium and chloral hydrate, and point out the principal therapeutic indications for the exhibition of these drugs alone, or combined with others. Illustrate by a prescription.

3. The physiological actions of preparations of mercury? therapeutical uses? Name the preparations of mercury as given in the B. P. Select two of the most useful and give their chemical history, doses, and modes of administration in the form of a prescription.

4. How would you classify cathartics?

Name the principal drugs in each division.

Select one in each. Give its botanical (or chemical) history, dose, and mode of administration.

5. Name each of the six drugs placed before you. Select any one and give its physiological actions and therapeutic indications.

6. Name each of the six botanical plants (recent) placed before you. Give the active principle or principles of each. Pharmacopœial preparations of each, and, if active principle be an alkaloid, its mode of separation.

FOURTH YEAR.

ANATOMY AND PHYSIOLOGY.

Examiner, Professor CHARLES, M.D.

1. Describe the microscopic characters of a vertical section of the cortex of the brain. Wherein does it differ from a corresponding section of the cerebellum?

2. What changes does the blood undergo in passing through the capillaries of (1) the intestines, (2) the liver, (3) the lungs, and, (4) the kidneys?

3. Give a concise account of the development of the lungs and the brain. Illustrate your description by a reference to the permanent condition of these organs in the lower animals.

4. By what means have the functions of the following parts of the nervous system been determined :—(1) The anterior and posterior roots of the spinal nerves; (2) the spinal cord; (3) the cerebellum; (4) the ganglia at the base of the brain; and (5) the cerebrum?

5. Give a description of the intra-ocular apparatus for effecting accommodation.

6. Name the specimens under the microscopes numbered 1–8, and the moist preparations numbered 1–5.

PRACTICAL ANATOMY.

Examiner, Professor CHARLES, M.D.

1. Describe the ossification of the sacrum, sphenoid, humerus, and fibula.

2. (a.) Enumerate the joints whose opposed surfaces are flattened, partly articular and partly non-articular, and the ligaments both external and

interosserous.   (b.) Name also the joints in which the osseous surfaces of the articular cavities are smaller than those of their corresponding heads. By what means is the extent of the articular cavities increased in such cases?

3. Describe the dissection you would make in order to expose, from the perinæum, the prostate gland. [No description of the parts themselves required.]

4. Give a detailed account of the veins of the pelvis.

5. How would you expose the spinal cord?   Give a full account of its membranes, arteries, and veins.

6. Tabulate the branches of the fifth cranial nerve.

7. Name the specimens numbered 1–10, and say from which side of the body each was taken.

PATHOLOGY.

Examiner, Professor O'CONNOR.

1. What are the different forms presented by acute inflammation of the skin?

2. State the causes of dry gangrene, and its usual situation.

3. State the cause or causes of pyæmia, with an outline of its progress, and the difference between it and septicæmia.

4. What are the appearances of the fæces in different forms of diarrhœa, also in dysentery?

5. What are the causes and the pathological appearances in lobular pneumonia, and the ages most liable to this disease?

6. Specify the different causes of hepatic congestion, distinguishing acute from chronic.

7. Describe the appearance of the kidney in the different forms of Bright's disease, and the remote and immediate causes of this affection.

8. In what manner do emboli produce cerebral disease?

SURGERY.

Examiner, Professor TANNER.

1. Describe pathologically the four great symptoms of inflammation.

2. Give the different means for arresting hemorrhage, including uncompression and forcipression, and describe the two chief methods of transfusion.

3. Explain the two classes of tumours, and the kinds into which the purely innocent, the sarcomatous, and carcinomatous are usually divided.

4. What are the four stages of gonorrhœa and the complications, and several methods of treatment?

5. What division has been made of diseases of the joints, their pathology and treatment?

6. What are the different kinds of calculi found in the male bladder, their symptoms, and the various operations for their cure?

7. Relate the history, varieties, and pathology of goitre, and the different methods of treatment, including the operation for its removal.

8. What are the causes of club foot, the several forms, and kinds of treatment?

9. What division has been made of the diseases of the ear?   Give the pathology and treatment of each.   Describe Politzer's method of opening the Eustachian tube.

MIDWIFERY.

Examiner, Professor HARVEY.

1. What is the fallopian tube? Describe its structure, its mode of connexion with other organ, and its functions. In what respects does it differ from other organs of a similar character? Can you explain how these peculiarities come to exist?

2. Enumerate the constituents of a vertebrate ovum. What is the earliest condition in which it is found to exist? Give the order of formation of its various parts up to the time at which the development of the embryo is ready to commence.

3. A woman in the first half of her pregnancy is seized with pain and uneasiness in the hypogastric and lumbar regions, and difficulty in passing water, accompanied by frequent desire to relieve the bladder. There is similar difficulty in evacuating the rectum; the distress increases, and is not relieved until efficient means are resorted to. What is the nature of the case, and how would you manage it?

4. You are called to a lady in the first stage of labour. There is no mechanical difficulty in the case; but the pains are slow and inefficient, and dilatation is proceeding very slowly. Upon what cause or causes may this state of things depend; how would you investigate them, and what remedial means may be necessary?

5. Detail the steps by which the face is brought to the presenting part in labour. What positions in this presentation found to assume; and what is the prognosis generally in face cases?

6. A woman near her confinement of her twelfth child is suddenly seized with abdominal pain, which gradually becomes more severe; it is accompanied by a sense of great tension, and there is a circumscribed hardness and elevation of a part of the uterine tumour; with these symptoms there is a quick, weak, rapid pulse; cold, damp skin, faintness, and the usual symptoms of loss of blood : no hemorrhage from the vagina, nor labour pains; what is your view of the case, and what is necessary to be done?

MEDICAL JURISPRUDENCE.

Examiner, Professor O'KEEFFE.

1. To what extent may the number, development, or other characters of the teeth assist in identifying a dead body?

2. Is it always possible to distinguish a wound inflicted after death from one produced during life? What conditions may render the diagnosis difficult?

3. The appearances in bodies after death by hanging, vary considerably. On what do these differences depend, and describe the most usual appearances?

4. You are called upon to examine a woman in a case of alleged concealment of birth. How would you proceed with your examination, and what special difficulties may present themselves?

5. A dark stain is found on the blade of a knife. To what causes may it be due? What precautions would you adopt in pronouncing whether it is or is not a bloodmark?

6. Ergot of rye in food has produced dangerous symptoms. What are they? How would you detect ergotism in ergotized flour?

7. Contrast the symptoms produced by irritant and narcotic poisons respectively. Select a typical member of each group. Give its chemical characters; physiological effects; smallest poisonous dose; post mortem appearances presented in the body of an animal poisoned by it; and the mode of its detection in the contents of the stomach, or in the tissues.

University and Special Prizes.

UNIVERSITY PRIZES IN GEOMETRY.

Appendix D.
Examination Papers for University and Special Prizes.

(See Paper set for these Prizes, App. D., Science Scholarships of First Year, Mathematics, First Paper, p. 95.)

UNIVERSITY PRIZE IN ENGLISH COMPOSITION.

Examiner, Professor ARMSTRONG.

SUBJECT FOR ESSAY:—*The advantages of a knowledge of the Languages and Literature of the Greeks and Romans.*

COLLEGE PRIZE IN ANTIENT HISTORY.

Examiners, Professor LEWIS and Professor BOULGER.

1. Give an account of Egypt, or Scythia, or the Persians, as described by Herodotus.

2. Trace the causes, and results, of the Ionian Revolt, B.C. 500?

3. Draw up an epitome of the history of the Peloponnesian War.

4. Write a brief memoir of any distinguished poet, statesman, or warrior, of Antient Greece.

5. Contrast the Spartan with the Athenian character.

6. State the provisions in the code of the Twelve Tables which were intended to protect person and property.

7. What were the chief events that occurred between the second and third Punic Wars?

8. Describe the extent of the Roman Empire in the age of the Antonines.

9. Give some account of Julia Domna.

10. When did Dion Cassius flourish?

The Early English Text Society's Prizes.

The Early English Text Society's Prizes.

Examiner, Professor ARMSTRONG.

1. Describe the immediate changes produced by the Norman Conquest in the political and social condition of England.

2. Trace the history of the House of Plantagenet.

3. Name and date the principal territorial acquisitions and losses of the English from the Conquest to the accession of Henry IV.

4. Decline *gifu*.

5. Give an example of the declension of the A. S. adjective, indefinite form.

6. Reproduce, as accurately as you can, Dr. Morris's account of the English of the Second Period.

7. Write out the pure English prefixes and suffixes and the Romance prefixes and suffixes used in Modern English.

8. Distinguish between the *Romances* and the *Fabliaus.*

9. Name the principal English Trouvères and Troubadours.

10. Reproduce, as accurately as you can, Chaucer's characters of the Doctor, the Merchant, and the Shipman.

11. Restore the following passages to their original form in the *Canterbury Tales*:—

(*a.*) "He loved so warmly that by night he slept no more than does the nightingale."

(*b.*) "There was no man anywhere better stored with wine."

(*c.*) "Of all the four orders there is none that knows so much of gossip and of flattery."

(*d.*) "She had some small dogs, which she fed with roast meat, and milk, and bread of the best flour; and she wept bitterly if any one of them happened to die, or if men smote [one] sharply with a wand."

New Shakspere Society's Prizes.

Examiner, PROFESSOR ARMSTRONG.

1. Trace the growth of English Comedy to the death of Ben Jonson.

2. Sketch the plot of *Much Ado About Nothing.*

3. To what class of dramas does *Much Ado About Nothing* belong? Distinguish the class from the several others under which Shakspere's plays are grouped.

4. To what period of Shakspere's life is *Much Ado About Nothing* referred?—What were the peculiarities of Shakspere's style during this period?

5. Give a brief account of Sir Philip Sidney.

6. Name the other principal prose-writers of the Elizabethan age, and give some account of their lives and works.

7. Analyze the character of Richard III., and specify the various scenes in which its salient features are most distinctly brought out.

8. Describe the events of the Act V. of *King Lear,* and quote Lear's dying speech.

9. Illustrate, by extracts and references, any resemblances and coincidences of thought or expression which present themselves in the plays of *King Lear* and *Timon of Athens.*

10. Compare the blank verse of *Timon* with that of *Richard III.*

11. State from what parts of the several plays the following passages are extracted, and by what characters and under what circumstances they are spoken:—

(*a.*) "   . . . . But now grow fearful,
By what yourself too late have spoke and done,
That you protect this course, and put it on
By your allowance."

(*b.*) "There is a cliff whose high and bending head
Looks fearfully on the confined deep."

(*c.*) "What need the bridge much broader than the flood?
The fairest grant is the necessity."

(*d.*) "Why, you speak like an ancient and most quiet watchman;
for I cannot see how sleeping should offend."

(*e.*) "   . . . . I pray thee, cease thy counsel,
Which falls into mine ears as profitless
As water in a sieve."

(*f.*) "Sorrow breaks seasons and reposing hours—
Makes the night morning, and the noontide night."

(*g.*) "What a wicked beast was I, to disfurnish myself against such a good time when I might have shown myself honourable."

APPENDIX E.

No. XV.

DONATIONS to LIBRARY, MUSEUMS, and BOTANIC GARDEN.

Library.

CATALOGUE of the GIFT of WILLIAM CRAWFORD, of LAKELANDS, Esq.

Allen, Captain, R.N., and T. R. H. Thomson, M.D., Surgeon, R.N., A Narrative of the Expedition to the Niger. 2 vols. 8vo.
London, 1848.

Anderson, C. J., Lake Ngami (2nd Ed.) 8vo. London, 1856.

Andres, D. G. Dell' origine progressi e stato attuale d' ogni letteratura. 4 vols. 4to. Parma, 1785.

Astle, T., Origin and Progress of Writing, &c. 1 vol. 4to. cf.
London, 1803.

Atkinson, T. W., Oriental and Western Siberia. 8vo. London, 1858.
„   „   Travels in the Upper and Lower Amoor.
8vo. London, 1860.

Balkie, W. R., Nar. of an Exploring Voyage up the Rivers Kwo'ra and Bi'nue. 1 vol. 8vo. London, 1856.

Barnard, F. A., Bibliotheca Regis Catalogus. 6 vols. Folio.
London, 1820-29.

Bell, Th., A History of British Stalk-eyed Crustacea. 1 vol. 8vo.
London, 1853.

Blume, C. L., Flora Java. Folio. Bruxelles. 1828.

Boate and Molyneux, Natural History of Ireland. 1 vol. 4to.
Dublin, 1726.

Boullaye le-Gouz, Les Voyages et observations du Sieur de la.
1 vol. 4to. cf. Paris, 1657.

Bourne, J., Handbook of Steam Engine. London, 1865.

Bowring, Sir John, A Visit to the Phillipine Islands.
8vo. London, 1859.

———— The Decimal System. London, 1854.

Boyle, Hon. Robert, Works of. 6 vols. 4to. Russia. London, 1772.

Brewster, Sir David, On the Stereoscope. London, 1856.

Brunet, J. C., Manuel de Librairé. 4 vols. 8vo. Paris, 1843.

Buffon, M. de, Histoire Naturelle des Oiseaux. 10 vols. Folio.
Paris, 1770-1786.

Bura, R. Scott, Handbook of Mechanical Arts. Edinburgh, 1860.

Burnes, Sir Alexander, Cabool. (2nd Ed.) 8vo. London, 1843.

Dictionary of Architecture—18 parts (A—LEAD), by the Architectural Publication Society.

Dictionnaire de Geog., Ancienne et Moderne and Par un Bibliophile.
21 pts. 8vo. Paris, 1870.

Dictionnaire Universel d' Histoire Naturelle. Edited by D'Orbigny.
12 vols. 8vo.

Duff, J. Grant, A History of the Mahrattas. 3 vols. 8vo. mca cf.
London, 1826.

Appendix E.

Erasmi, Omnia opera. 9 vols. Fol. vellum. Basilii, 1540.
Fabretti, A., Corpus Inscriptionum Italicarum. 4 to. Taurini, 1867.
   Supplemento alla raccolta delle antichissime iscrizioni
   Italiche (Primo e secondo). (3 parts.) 4 to. Roma, 1873-74.
Fabricii Bibl. Lat. mediæ et infimæ statis cum supp. 6 vols. in 3.
   4to. vel. Patavii, 1754.
Fauriel, C., Chants Populaires de la Grèce Moderne. 2 vols.
   Paris, 1834.
Forbes and Hanley's History of British Mollusca. 5 vols. 8vo. hf. cf.
   London, 1853.
Forbes, Ed., A History of British Starfishes. 1 vol. 8vo.
   London, 1841.
Geological Society of London, Proceedings of. 3 vols.
    Journal of the, from 1845 to 1876.
Geological Survey of Ireland, 87 Maps of the.
  " " — Explanations to Maps of. 23 parts.
Gould, J., Birds of Australia. 7 vols. Folio. London, 1848-1869.
   — Supplement to above. 5 parts. Folio. London, 1851-1869.
Gray, Maria E., Fig. of Molluscous Animals, &c. 5 vols. 8vo.
   London, 1859.
Herschel, Sir J., Astronomy. (2nd Ed.) 8vo. London, 1849.
Histoire et Mémoires de l'Académie Royale des inscriptions et belles
  lettres (depuis son establissement jusques et compris l'Année
  MDCCXCIII., avec tables des matières depuis vol. I. jusques et
  compris le vol. XLIII.; et tableau général raisonné et méthodique,
  en tout. 51 vols.) Paris, 1736-1808.
  " de l'Institut de France, classe d'histoire et de littér-
  ature ancienne, et académie des inscriptions et belles lettres.
   Tomes I.-XXI. and XXIX. in 29 vols.
    Paris, 1815-1868.
Humphrey's, H. N., Origin and Progress of the Art of Writing.
   1 vol. 8vo. hds. London, 1853.
Humboldt, Aspects of Nature. 2 vols. 8vo. London, 1849.

India, Documents, Tracts, &c., relating to :—
  Selections from the Records of the Government of India. (Home
   Department.) 11 vols. 8vo. Calcutta, 1853-1864.
  Selections from the Records of the Bengal Government. 11 vols.
   8vo. Calcutta, 1851-1864.
  Selections from the Records of the Bombay Government. 28 vols.
   8vo. Bombay, 1853-1865.
  — Irrigation Series. Vol. I. 8vo. Bombay, 1866.
  Map of the Province of Kattywar. (Bombay Government.)
  Maps and Plans to accompany No. 53. (Bombay Government.)
  Plans to accompany Vol. No. 61. (Bombay Government.)
  Plans to accompany Selection No. 49. (Bombay Government.)
  Plans for the Lake Project in the Amednugger Collectorate.
   (Bombay Government.)
  Plans for the Tank at Ekrookh. (Bombay Government.)
  Lithographed Drawings (two) for the Water Supply of Kirkee and
   Poona. (Bombay Government.)
  Selections from the Records of the Government of India. (North-
   west Provinces.) 7 vols. 8vo. Allahabad, 1864.
  Plans and Sections for the Water Supply to the Poonah Cantonment.
  Selections from the Records of the Madras Government.
   28 vols. 8vo. Madras, 1854-67.

Microscopical Journal. 12 vols.

Microscopical Society, Transactions of. Vol. I. 8vo.

   London, 1849.

Mill, J. S., Political Economy. (2nd Ed.) 2 vols. 8vo.

   London, 1849.

Montfaucon, Antiquities. 7 vols. Folio. London, 1721.

Moreri, L., Le Grand Dictionaire Historique. 10 vols. Folio.

   Paris, 1759.

Morton, John, On Soils. 4th Ed. London, 1840.

Müller, C. O., History and Antiquities of the Doric Race. Translated by H. Tufnell and G. Cornwall Lewis. 2 vols. 8vo.

   Oxford, 1830.

Murchison, Sir R. I., Siluria. 8vo. London, 1854.

Murray, A., Geographical Distribution of Mammals. 4to. London, 1866.

Nares' Glossary, &c. 1 vol. 4to. Russia. London, 1822.

Newtoni, J., Omnia Opera. 5 vols. 4to. Russia. Londini, 1779.

Nicholson, P., Principles of Architecture. 3 vols. 8vo. Boards.

   London, 1827.

Notes and Queries. 2nd Series, Vols. I.–XII. (1856–61); 3rd Series, Vols. I.–X. (1862–66); and 4th Series, Vol. I. (1868), and 9 parts for 1869.

Oriental Translation Fund (Publications of the)—

  Al-Makkari, The History of the Mohammedan Dynasties in Spain, from the Arabic by Pascual de Gayangos. 2 vols. 4to.

   London, 1840.

  Avesta, the Religious Book of the Parsees, transl. from Prof. Spiegel's German translation of the original MSS. by A. H. Bleeck. 3 vols. in 1. 8vo. Hertford, 1864.

  Dabistan, The, or School of Manners, from the Persian by D. Shea and A. Troyer. 3 vols. 8vo. Paris, 1843.

  Haji Khalfa, Lexicon bibliographicum et encyclopædicum a Mustafa ben Abdallah Katib Jelebi dicto et nomine Haji Khalfa celebrato compositum, &c. (Translated, &c. by Gustav Flügel). 7 vols. 4to. Leipzig, 1835–59.

  Ibn-Khallikan's Biographical Dictionary, translated from the Arabic by Baron MacGuckin de Slane. 4 vols. 4to.

   Paris, 1842–71.

  Kitab-i-Yamini, The Historical Memoirs of the Amir Sabaktagin, &c. Translated from the Persian by Rev. James Reynolds, &c. 1 vol. 8vo. London, 1858.

Owen, R., Palæontology. 8vo. Edinburgh, 1860.

Oussley, Sir W., Travels. 3 vols. 4to. London, 1819.

Parkyns, Mansfield, Life in Abyssinia. 2 vols. 8vo. Boards.

   London, 1853.

Paris, M. Paulin, Les Manuscrits François de la Bibliothèque du Roi. 7 vols. 8vo. Paris, 1836–48.

Quetelet, J., On the Microscope. 8vo. London, 1848.

Recueil de Voyages et de Mémoires, publié par la Société de Geographie. 6 vols. 4to. Paris, 1824–40.

Reichenbach, H. G., Xenia Orchidacea 8, 9, 10 Heft, Zweiter Band.

   4to. Leipzig, 1873–74.

Reusa, J., Repertorium Commentationum a Soc. Lit. Edit.

  16 vols. in 8. 4to. Half calf. Gott., 1801.

Sclater and Salvin, Exotic Ornithology. 13 parts. Folio.

   London, 1866–69.

Siebold, P. F., Flora Japonica. Folio. Lug. Bat., 1826.

Appendix I.
Donations
to Library,
Museums,
&c.

Smith, A., Wealth of Nations. By M'Culloch. 4 vols. 8vo. Boards.
　　　　　　　　　　　　　　　　　　　　　　　　　　Edinburgh, 1828.
Smyth, W. H., The Celestial Cycle. 2 vols. 8vo. London, 1844.
Stephens, J. L., Incidents of Travel in Central America, Yucatan, &c.
　　(By Catherwood.) 1 vol. 8vo. Boards. London, 1854.
Stritterus, I. C., Memoriæ populorum, olim ad Danubium, Pontum
　　Euxinum, Paludem Mæotidem, Caucasum, Mare Caspium, et inde
　　magis ad septentriones incolentium e scriptoribus historiæ Byzantinæ
　　eratæ et digestæ. 4 vols. 4to. Petropoli, 1771–79.
Swainson, W., New Zealand and its Colonization. 8vo. London, 1859.
Temminck, C. J., Planches coloriées d'Oiseaux. 5 vols. Folio.
　　　　　　　　　　　　　　　　　　　　　　　　　　Paris, 1838.
Tooke, T., History of Prices. 5 vols. 8vo. Boards. London, 1838–57.
Ulloa, Journal of Archæology. 2 vols.
　　　　　　　　　　　　　　　　　　　　　　　　　　London, 1873.
Vámbéry, A., History of Bokhara, &c. 1 vol. 8vo. Boards.
　　　　　　　　　　　　　　　　　　　　　　　　　　London, 1873.
Vattel, M. de, Law of Nations. 1 vol. 8vo. Half calf. London, 1811.
Watt, Robert, Bibliotheca Britannica. 4 vols. 4to. Edinburgh, 1824.
Weisbach, J., The Mechanics of Machinery and Engineering. 2 vols.
　　　　　　　　　　　　　　　　　　　　　　　　　　London, 1848.
Winckelmann, G., Monumenti Antichi inediti. 2 vols. Folio.
　　　　　　　　　　　　　　　　　　　　　　　　　　Roma, 1821.
Wolf, J., Zoological Sketches. Edited by Sclater. Folio.
　　　　　　　　　　　　　　　　　　　　　　　　　　London, 1861.
Wrangell, F., Expedition to the Polar Sea. (Edited by Colonel Sabine.)
　　　　　　　　　　　　　　　　　　　　　　　　　　London, 1840.
Wurtz, Ad. History of Chemical Theory. (Edited by Watts.)
　　　　　　　　　　　　　　　　　　　　　　　　　　London, 1869.

List of Books presented by PROFESSOR R. DE VÉRICOUR.

Ampère, J. J., Histoire de la Littérature française au moyen age.
　　　　　　　　　　　　　　　　　　　　　　8vo. Paris, 1841.
Blase de Bury (Le Baron de), Écrivains et Poetes de l'Allemagne.
　　　　　　　　　　　　　　　　　　　　　　8vo. Paris, 1846.
Dullers, Ed., Geschichte der deutschen Volks. (Von W. Pierson.)
　　　　　　　　　　　　　　　　　　　　　　8vo. Berlin, 1846.
Genin, F., Lexique comparé de la Langue de Molière. (Didot.)
　　　　　　　　　　　　　　　　　　　　　　8vo. Paris, 1846.
—— Récreations Philologiques. 2 vols. 8vo. Paris, 1856.
Gioberti, V., Del Bello e del Buono. 8vo. Losana, 1846.
Goedeke, Karl, Goethe und Schiller. 1 vol. 8vo. Hanover, 1859.
Hegel, W. F., Cours d'Esthetique. (Par Bénard.) 5 vols. 8vo.
　　　　　　　　　　　　　　　　　　　　　　Nancy, 1840–1852.
Jouffroy, Cours d'Esthetique. 8vo. Paris, 1843.
Keratry, M., Du Beau dans la Nature, &c. 8vo. Paris, 1856.
—— Du Beau dans les Arts d'Imitation, &c. 2 vols. 8vo.
　　　　　　　　　　　　　　　　　　　　　　Paris, 1822.
—— Examen Phil. du Sublime et du Beau. 8vo. Paris, 1823.
Martin, La Russie et l'Europe. 8vo. Paris, 1856.
Thiersch, F., Algemeine Aesthetik. 8vo. Berlin, 1846.
Vischer, F. T., Aesthetik oder Wissenschaft des Schönen. 8vo.
　　　　　　　　　　　　　　　　　　　　　　Leipzig, 1846.
Wey, M. F., Histoire des Revolutions du Langage en France.

List of Miscellaneous Gifts:—

Antiquary, The Indian. (Bombay). Received regularly.
    By the Secretary of State for India.
Belfast Philosophical Society, Proceedings of, for Session 1875-76.
    By the Society.

British Association:—
  Fauna and Flora of the West of Scotland. 8vo. 1876.
  Catalogue of the Western Scottish Fossils. 8vo. 1876.
  Notices of some of the Principal Manufactures of the West of
    Scotland. 8vo. Glasgow, 1876.
    By the Glasgow Local Committee of the British Association for the
    Advancement of Science.

British Museum Publications:—
  Facsimiles of Ancient Charters. Part II. Folio. 1876.
  Facsimile of an Egyptian Hieratic Papyrus. Folio. 1876.
  Catalogue of Sanskrit and Páli Books. By Ernest Hass. 4to. 1876.
  Catalogue of Greek Coins, Sicily. 8vo. 1876.
  Catalogue of British Aphides. By G. B. Buckton. 8vo. 1876.
  Catalogue of British Bees. By F. Smith. 8vo. 1876.
  Catalogue of the Fossil Reptilia of South Africa. By Richard
    Owen. 4to. London, 1876.
  Catalogue of Chinese Printed Books, Manuscripts, and Drawings.
    By R. K. Douglas. 4to. 1876.
  Catalogue of Playing and other Cards. By W. H. Willshire.
    8vo. 1876.
  Lepidoptera Heterocera, Illustrations of. By A. G. Butler.
    4to. 1876.
  Guide to the Exhibition Rooms of the Departments of Natural
    History and Antiquities. 8vo. 1876.
  Catalogue of British Fossil Crustacea. By H. Woodward.
    8vo. 1876. By the Trustees.

Canada, Geological Survey of. Report of Progress for 1875-76.
    By the Director of the Geological Survey on behalf of the Govern-
    ment of Canada.
Canadian Journal, The, of Science, Literature and History. Received
    regularly. By the Canadian Institute.
Chemist and Druggist, The. (London.) Received regularly.
    By the Editor.
China, Medical Reports. (Shanghai.) Received regularly.
    By the Inspector-General of Chinese Maritime Customs.
Chaucer Society. Autotypes of Chaucer Manuscripts. Folio.
    By the Chaucer Society.
Cork, Fauna and Flora of the county of. By Richard Caulfield, LL.D.
    By the Author.
Davenport, C. S. America. Proceedings of the Academy of Natural
    Sciences. Vol. I. 1867-1876. By the Academy.
Fitzgerald, R. D., F.L.S. Australian Orchids. Part II.
    By the Government of New South Wales.
Graham, Thomas. Chemical and Physical Researches. 8vo. Edinburgh,
    1876. By James Young, F.R.S., and Angus Smith, F.R.S.
Hayden, F. V. Geological Survey of the U. S. America.
    4to. 8vo. XX and X. 4to. 1876.
    Geological Survey (U. S. America), of Wyoming,
    Preliminary Report of. 8vo. 1870. By the Author.
India, Geological Survey of, Memoirs of, &c. Received regularly.
    By the Governor-General of India.

            Vols. XLIV., XLV., XLVI., XLVII., and XLVIII.

                  By the Institution of Civil Engineers.

Journal de l'Instruction publique. Province of Quebec, and

Journal of Education. Province of Quebec. Received regularly.

                  By the Minister of Public Instruction.

Karslake, Logic. 2 vols. 8vo. Oxford, 1851.

                  By Professor G. S. Read, Q.C.C.

Lincei, Atti della R. Accademia dei. Received regularly.

                  By the Accademia dei Lincei.

London University, Catalogue of the Library of. By the University.

Medical News, The (Philadelphia). Received regularly.

                  By the Publisher.

Navy Medical Reports. 1875. By the Navy Medical Department.

Norreys, Sir Denham, Report on the State of the District around

    Mallow, in 1775. By the Author.

Public Health Reports of the Officers of the Privy Council.

    Nos. 7 and 8. By the Local Government Board, England.

Quebec, Report of the Minister of Public Instruction for the Province

    of, for 1875-76. By the Minister of Public Instruction.

Returns, Weekly, of Births and Deaths, Dublin.

Returns, Quarterly, of Marriages, Births, and Deaths, Ireland.

    Received regularly. By the Registrar-General.

Rio de Janeiro, Archivos Museu Nacional do. Vol. I. 1 Trimestre.

    1876. By the Brazilian Government.

Smithsonian Institute, Contributions to Knowledge. Vol. XX.

     „   Report of, for 1875.

                  By the Smithsonian Institute.

Streeter, Ed. W., Gold : or Legal Regulations for the standard of, &c.

    Translated by Mrs. Brewer. 8vo. London, 1877. By the Editor.

United States Coast Survey. Report of the Superintendent of the,

    for 1873. 4to. 1875. By the Superintendent.

Museums.

MINERALOGICAL AND GEOLOGICAL MUSEUM.

Rock Crystal, with beautiful pearly lustre on the pyramidal faces.

            By Miss G. E. Cotter, Rockforest, co. of Cork.

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Asphalt from the Pitch Lake, Trinidad.   By the President.

NATURAL HISTORY MUSEUM.

300 dried Specimens of Tropical Ferns, grown in the conservatories of

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       By Mr. Sullivan, Superintendent of Botanic Garden.

Specimen of Sponge attached to coral rock from the Levant.

                  By J. R. Eames, M.D.

90 Specimens of recent Shells from Trichinopoly, Ceylon.

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Botanic Garden.

Cuttings of 50 varieties of Willows.

    By Dr. Moore, Director of the Botanic Garden, Glasnevin.